

THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—20TH YEAR.

SYDNEY, SATURDAY, MAY 6, 1933.

No. 18.

Table of Contents

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ORIGINAL ARTICLES—	PAGE.	ABSTRACTS FROM CURRENT MEDICAL LITERATURE—	PAGE.
An Address: "The Service of the British Medical Association", by A. HOLMES A COURT, M.D., F.R.C.P.	541	Surgery	562
"The Growth Curve of Australian Infants During the First Year of Age", by F. W. CLEMENTS, M.B., B.S.	543	BRITISH MEDICAL ASSOCIATION NEWS—	
"Buccal Carcinoma and Its Treatment", by H. SKIPTON STACY, M.D., F.R.A.C.S.	549	Annual Meeting	564
"The Function of the Sympathetic Nervous System", by N. D. ROYLE, M.D., Ch.M., F.R.A.C.S.	550	CONGRESSES—	
"Experiences in Radiation in Cancer in the Female Pelvis", by CONSTANCE E. D'ARCY, M.B., Ch.M., F.R.A.C.S., and LEILA KEATINGE, M.B., D.M.R.E. 553		Conference of the Chinese Medical Association	569
REVIEWS—		CORRESPONDENCE—	
Psychoanalysis	558	Hypoglycemia	570
Surgery of the Rectum	558	Cancer of the Breast	571
A Text Book on Massage and Exercises	558	Miners' Nystagmus	571
LEADING ARTICLES—		OBITUARY—	
The Journal and Its Functions	559	Robert Hamilton Russell	572
CURRENT COMMENT—		DIARY FOR THE MONTH	572
Immunization Against Diphtheria by Alum-Toxoid 560		MEDICAL APPOINTMENTS	572
Mechanical Reproduction of Heart Sounds . . . 561		MEDICAL APPOINTMENTS VACANT, ETC.	572
		MEDICAL APPOINTMENTS: IMPORTANT NOTICE 572	
		EDITORIAL NOTICES	572

An Address.¹

THE SERVICE OF THE BRITISH MEDICAL ASSOCIATION.

By A. HOLMES A COURT, M.D. (Sydney), F.R.C.P. (London),
President of the New South Wales Branch of the
British Medical Association.

I HAVE first to express my profound appreciation of the honour conferred by election as President of the New South Wales Branch of the British Medical Association, a position in which with full confidence of your loyal support, I shall endeavour to uphold the honourable traditions of our Association, and to emulate the example of willing service which has characterized my predecessors in this high office.

¹ Delivered at the annual meeting of the New South Wales Branch of the British Medical Association on March 30, 1933.

The position of president is one in which great opportunities are vouchsafed to further the aims and objects of our worthy fellowship, but I am not unmindful of the fact that "opportunity and responsibility are twin sisters".

Being therefore privileged to address you on this occasion, I have selected as a text "The Service of the Association".

The year passed marked, as you are aware, the centenary of the British Medical Association, which has provided a record of a hundred years of humanitarian service and scientific achievement unparalleled in the history of any other learned profession or society.

The astounding progress which the past hundred years have produced in the art of healing and the science of preventive medicine, as well as the multitudinous activities of the Association in the service of the public, was admirably reviewed by the President, Lord Dawson of Penn, in his address to the

centenary gathering in London. In Australia it is fitting to note that the first offshoot of the Association to be established was the Victorian Branch in 1879, and in the year 1880 our Branch in New South Wales was recognized by the parent body.

The number of members of the New South Wales Branch in the year of its foundation was 42, and during the succeeding fifty-two years of its existence the record has been one of steady and constant progress, until at the present time our membership reaches approximately 1,600, and represents an overwhelming majority of the medical practitioners registered in the State. During the half century of our existence the aim of the Association has ever been to unite the profession in the service of the public, and to foster scientific progress in medicine. Did time permit, much could be written of the services rendered to the State, to the public, and to the profession by our Association during its fifty-two years of activity, and fitting tribute might be paid to the men who have laboured unselfishly in the interests of the organized body of the profession in that period.

The names of many of our past presidents and councillors would hold honoured place in such a record.

Although it is well gratefully to recall the men whose labours have made the present position of our profession what it is, in the glamour of the past we must beware of losing sight of the exigencies of the present period and the prospects which the future holds for our Association and for members of the medical profession. The recent period of depression which has so grievously affected almost the whole civilized world, and which we are now encouraged to hope has passed its nadir, has proved a time of difficulty for our Association, and a sore trial for many of our individual members. The Association has striven to face bravely all the difficulties which have been encountered. In the sphere of lodge practice your Council rendered helpful service in assisting the friendly societies by asking medical officers of lodges to accept on their lists without payment a proportion (10%) of unemployed lodge members. This generous and public spirited action has been duly appreciated by the United Friendly Societies, with whom we remain on the most amicable terms. There are, however, districts in which unemployment is rife, where our members have given generous service to sick persons otherwise inadequately provided for, often at very great personal sacrifice, in some instances to an extent rendering their own living precarious from depletion of income with which to meet incurred expenditure, to say nothing of the time and skill involved in services rendered. Such a state of affairs is obviously wrong, and representations have been made to the State Government for assistance in such areas.

As an association we are not infrequently misunderstood and misjudged by the public, who are sometimes wont to regard us as a "trades union" concerned only with our own interests. The fact that the great amount of our activities as an organi-

zation are directed towards the public weal and for the prevention of disease, is neither sufficiently recognized nor appreciated. Are we not indeed the only professional body whose activities are constantly exercised for the eradication of disease, and incidentally to the restriction of our own source of livelihood? For the public attitude we are perhaps ourselves in part responsible: our very aloofness and shunning of publicity make it appear to the unthinking that we are a close corporation intent only on our own affairs. Moreover, the restrictions of "medical etiquette", sometimes referred to disparagingly by the public and the Press, are not infrequently a source of misunderstanding by the laity, although in plain truth the rules and canons of our guild are devised primarily for the well being and protection of the sick themselves.

It is hoped that in the near future the official broadcasting by the Association of addresses on matters of medical importance to the community may be of benefit in placing certain of the essential facts of health and disease before the public in a helpful manner. Lectures on the welfare and nutrition of infants, the recognition of early signs of serious illness, the control of infectious disease in the household, and similar topics, broadcast to a widespread audience should serve a useful purpose in supplying authoritative information, and should tend to check the effect of alarmist and misleading pseudo-scientific statements which might have a result anything but enlightening to the lay mind. The public should receive protection at our hands from charlatans and quackery. It is a matter of common knowledge, as Oliver Wendell Holmes observed, "that exalted wisdom, immaculate honesty, and vast general acquirements are insufficient to prevent an individual from having the most primitive ideas on subjects out of his line of thought". An astute observer, he remarked "the boundless credulity and excitability of mankind upon subjects connected with medicine".

The present era of social evolution is conspicuous for the tendency of the State to take charge of social services of all kinds to an ever increasing extent, and there are those who would regard the "nationalization" of medical service to the community as an object to be desired. In part this idea finds concrete expression in the term nationalization of hospitals, so frequently put forward. Systems of national health insurance have already been introduced in other lands, and it might well befit the Association to formulate clearly defined and constructive ideas on matters of this nature, so that should occasion arise, the profession would not be unprepared to take a leading part in such an undertaking, and to guide legislative enactments into salutary directions.

This subject might well be commended to our incoming Council as a monumental contribution to the service of the profession in Australia.

In the past year much of the energy of your Hospitals Committee has been devoted to the evolution of a public hospitals policy which, while recognizing that the services of the hospitals should be

made available to all classes of the community, would safeguard the interests of the profession and insure fair treatment both for patients and for medical practitioners.

While members of our profession are, and always have been, ready to render gratuitous service to the poor and indigent in public hospitals as an act of grace, there is surely no section of the community which should be expected to render service without reward to those placed in a financial position such as to enable them to contribute wholly or in part for this treatment, or to those for whom provision is made by sickness or accident insurance. There is a regrettable and growing tendency for the public to assume that medical service should be gratuitous in cases where hospital expenses and other phases of treatment are covered by insurance, but where inadequate provision has been made in legislative enactments for payment for professional services. The operation of the *Workers' Compensation Act* in this State has involved considerable work on the part of your Council in its efforts to insure adequate recognition for the services of medical attendants to injured workers.

The labourer in the art and practice of medicine is assuredly worthy of his hire, and little good would accrue to a community in which professional services were not fairly recognized and adequately recompensed.

Without detriment to the obvious desirability of State control of quarantine, sanitation, hygiene, and other aspects of public health services, it is hardly to be believed that a complete control of medical attendance of all classes by State servants would be, in an individualistic community such as ours, an advantage to the sick generally, eliminating inevitably, as it would, the keen sense of personal responsibility for the individual which has throughout the ages been the attribute of the family physician.

How inadequately indeed can the value of services rendered by the general practitioner be expressed in terms of money, nor can the value of human life or of self-sacrifice in the service of a fellow creature be estimated on a purely commercial basis.

The exponents of an art must remain in a measure distinct from those who "drive a trade", and it is well for the community that the doctor should be maintained with altruism and generosity among his outstanding attributes, although through these very virtues the profession has not infrequently been made the victim of imposition. I have spoken of service in its active sense—the service rendered by the Association, and by the individual members to the public.

The service given to the Association by those who have faithfully guided its destiny, and controlled its organization and policy down the years, might not inappropriately receive approbation. Although fully appreciative of Osler's pronouncement that "to secure a good-natured equanimity one of the first essentials is not to expect too much of the people with whom we dwell", I trust that it will not be

misunderstood when I say that by many the work performed by your elected representatives on the Council is not always adequately appreciated, involving as it does an ever-increasing sacrifice of time and energy in your service.

To some of those who have given years of service on the Council, it is a distressing fact that a larger number of our members do not take greater active interest in the affairs of the Association. Particularly is this evident in a matter so important as the election of the executive body. In an association such as ours, the scientific meetings of our sections might reasonably claim greater support than is sometimes forthcoming. During the present period of depression, where there is for many a measure of enforced inactivity, and the time and energies of men are less completely consumed by routine work, material loss might be transformed to moral and intellectual gain, if opportunity were seized to devote more energy to scientific study and pursuit. May I plead, therefore, for the earnest cooperation of all members in the work of the Association and for support for your Council, material as well as moral, so that our hands may be strengthened by the knowledge that in our activities affecting the public weal and the welfare of the profession we are a body united by unswerving loyalty?

Sure in this knowledge, may we carry on faithfully the honourable tradition of service.

THE GROWTH CURVE OF AUSTRALIAN INFANTS DURING THE FIRST YEAR OF AGE.¹

By F. W. CLEMENTS, M.B., B.S. (Sydney).

(From the School of Public Health and Tropical Medicine, University of Sydney.²)

PART I.

WITH the idea of making some use of the wealth of material being annually collected by the New South Wales baby health centres, an investigation was made into the growth in weight of Australian infants during the first year of life.

It was the intention to study a large number and ultimately to arrive at a satisfactory mean average curve which might be taken as a standard for Australian infants.

Present Knowledge.

A survey of the literature revealed that Dr. Vera Scantlebury, Director of the Infant Welfare Department, Victoria, read a paper before the Medical Science and National Health Section of the Australasian Association for the Advancement of Science, at Hobart, in 1928,⁽¹⁾ in which reference was made to a growth curve which Dr. Scantlebury had prepared from observations on 700 Victorian infants.

Dr. T. Brailsford Robertson investigated 159 infants from the Adelaide School for Mothers Institute,⁽²⁾ and prepared figures for the average growth during the first year of life.

¹ Read at a meeting of the combined Sections of Physiology and Experimental Biology and of Medical Science and National Health of the Australian and New Zealand Association for the Advancement of Science, Sydney, on August 19, 1932.

² Endowed by the Commonwealth Department of Health.

The Material.

With the kind permission of Dr. Sydney Morris, Director of the Maternal and Baby Welfare Department, New South Wales Department of Health, visits were made to several baby health centres in Sydney.

The baby health centre was established with the idea of controlling the baby's first year of life. Babies attend the clinics regularly, and a reliable record of their weights is kept on a suitable card. Only such cards were selected for this investigation as showed a complete twelve months record. No cards of babies who had been ill at any time during the twelve months were included, nor were premature babies. No twins were included. No attempt was made to select cards of overweight babies, but only of those who the sisters were convinced had run a natural, normal course, whether they were slightly above or below the average weight. As far as possible only babies of Australian-born parents were selected.

Cards were selected from the baby health centres established at Riley Street, Surry Hills, Mosman and Alexandria. By this means it was thought possible to obtain a fair average sample, for Riley Street is a slum area, Mosman is a better class residential area, and Alexandria is an industrial area.

The Observations.

The total number of infants was 1,215, upon whom approximately 30,000 observations were made. Of the infants 602 were females and 613 were males, with approximately 15,000 observations on each, males and females, thus averaging about 24 observations for each infant during the year.

Compilation of Data.

Birth Weights.—Many of the babies from Riley Street and Alexandria health centres were born in either Crown Street Women's Hospital or the Royal Hospital for Women, Paddington, where the birth weights would be accurately recorded. These were the only birth weights accepted.

Fortnightly Weighings.—As most babies visited the health centres weekly, or at most fortnightly, it was considered that to take observations every fortnight would be sufficient. Accordingly, the recorded weights estimated every two weeks from the second to the fifty-second week of the babies' age were tabulated from the cards to large sheets of paper, and eventually the means for each age period were struck off.

From these the standard deviation⁽³⁾ was arrived at, which enabled the probable error to be calculated. Also the coefficient of variability was estimated, and these results, together with the number of observations for each age period, are given in Tables I and II.

From column 3 of these tables the mean average weights were graphed and then an attempt was made to fit a suitable curve to the graph obtained by joining the plotted points.

Because one would expect a growth curve to possess a logarithmic factor, a curve possessing as one of its terms "c log" was tried, but the result was disappointing. A parabola of the second degree

TABLE I.
Males.

Age in Weeks.	Number of Observations.	Weight in Ounces.	Coefficient of Variability.
Birth	289	120±12.6	14.4%
2	233	137±12.0	12.9%
4	461	149±12.7	13.1%
6	517	162±14.4	13.2%
8	554	176±14.7	12.4%
10	574	188±14.8	11.8%
12	598	199±15.0	11.2%
14	589	212±15.0	10.6%
16	604	223±15.0	10.0%
18	580	232±15.3	10.0%
20	591	242±15.0	9.1%
22	597	251±15.4	9.0%
24	594	258±15.24	8.8%
26	586	265±15.8	8.8%
28	595	275±16.0	8.6%
30	585	282±16.5	8.7%
32	605	289±16.8	8.5%
34	577	296±16.5	8.1%
36	581	302±16.7	8.2%
38	575	309±16.8	8.1%
40	587	315±17.1	8.0%
42	590	320±16.8	7.7%
44	580	326±16.8	7.3%
46	588	331±15.8	7.0%
48	569	337±15.0	6.6%
50	585	342±14.7	6.4%
52	555	348±14.3	6.0%

TABLE II.
Females.

Age in Weeks.	Number of Observations.	Weight in Ounces.	Coefficient of Variability.
Birth	221	126±10.4	12.2%
2	206	131±10.0	11.3%
4	290	144±11.0	11.2%
6	445	157±12.0	11.4%
8	564	170±12.4	10.8%
10	573	183±12.7	10.3%
12	581	193±13.0	10.0%
14	588	205±14.0	10.2%
16	595	214±14.0	9.7%
18	597	225±14.0	9.3%
20	601	235±14.3	9.0%
22	602	244±14.4	8.8%
24	605	253±14.5	8.6%
26	602	260±15.0	8.6%
28	602	267±15.9	8.8%
30	602	274±16.2	8.7%
32	602	281±16.2	8.5%
34	600	288±16.3	8.4%
36	600	294±16.7	8.4%
38	600	300±16.7	8.4%
40	599	306±16.7	8.1%
42	597	312±16.28	7.7%
44	593	316±16.0	7.6%
46	588	321±15.6	7.2%
48	587	325±15.0	6.8%
50	582	333±14.4	6.4%
52	581	338±14.0	6.2%

was then fitted,⁽⁴⁾ and as will be seen from Charts I and II, the result was fairly satisfactory. It is interesting to note that the growth curve for the first year of life should be a parabola of the second degree.

In Charts I and II the heavy line represents the smoothed curve, and the dots the actual calculated weights, whilst the fine lines are *plus* once and twice the possible error and *minus* once and twice the probable error.

When the growth curves for weight of the male and female infants are compared as in Chart III, it is noted that the females are lighter than the males throughout the year, becoming still relatively lighter towards the end of the first year. From this fact alone it is evident that when the plotting of a weight curve for the first year is attempted, the sexes should be differentiated, because difference in sex accounts

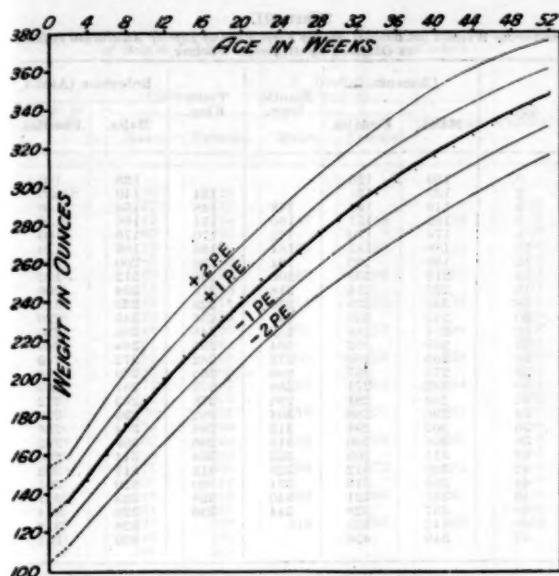


CHART I.

The heavy line represents the smoothed curve of the mean weights of 613 male infants. The dots are the actual weights obtained. The light lines are plus and minus once and twice the probable error of the class frequencies at each age period.

for a difference in weight almost equal to the probable error from the fortieth to fifty-second weeks.

Comparison with Other Australian Growth Curves.

It was thought that it would be of interest to compare the weight curve obtained in this series with weight curves obtained by other investigators.

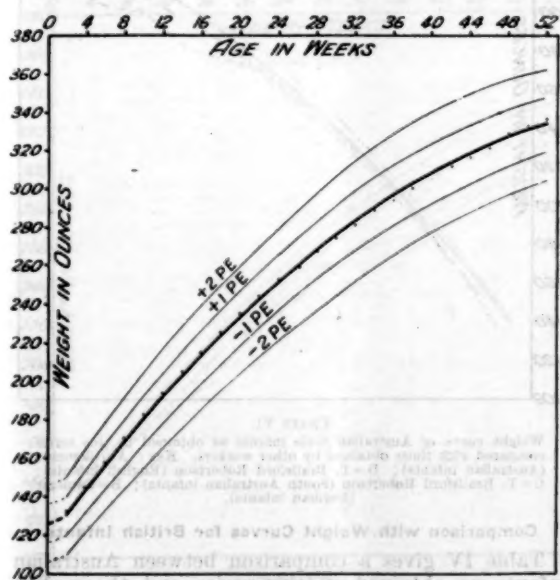


CHART II.

The heavy line represents the smoothed curve of the mean weights of 602 female infants. The dots are the actual weights obtained. The light lines are plus and minus once and twice the probable errors of the class frequencies at each age period.

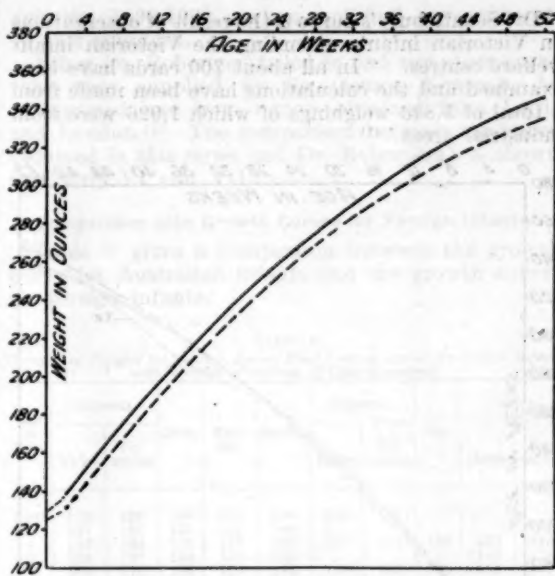


CHART III.

The continuous line represents the weight curve of male infants, the broken line that of female infants.

Some investigators had not separated the infants into sex, so that it was necessary to obtain an average for all infants, irrespective of sex, to compare with the figures obtained by other investigators. In Chart V a comparison is made between this graph and the curve obtained by Dr. Vera Scantlebury and another curve supplied by Sir Truby King.

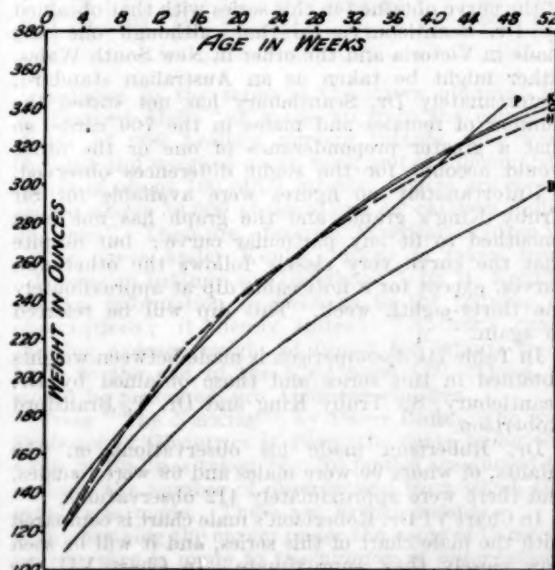


CHART IV.

Comparison between the weight curves of Australian infants as obtained in this series and the weight curves obtained by other investigators. In these curves no attention was paid to the sex of the infants. Key: C=Clements (this series) (Australian infants); H=Holt (American infants); K=Koplik (American infants); B=Buden (French infants); P=Pritchard (London infants).

Dr. Scantlebury's curve is the result of observations on Victorian infants attending the Victorian infant welfare centres. "In all about 700 cards have been examined and the calculations have been made from a total of 5,843 weighings of which 1,926 were from industrial areas."⁽¹⁾

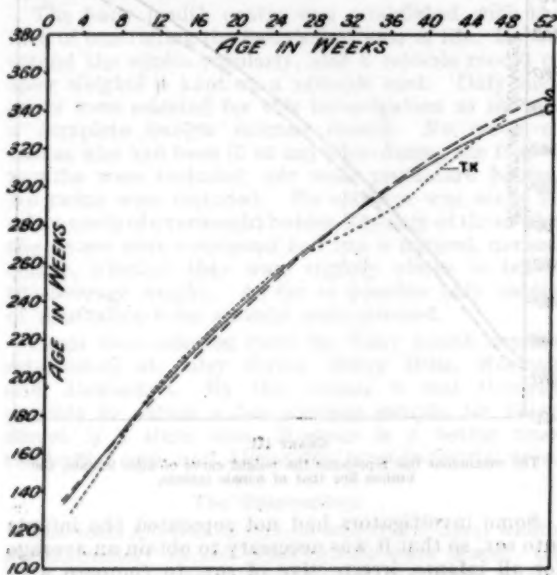


CHART V.
The weight curve of Australian infants as obtained in this series as compared with those obtained by other workers. Key: C—Clements (this series); S—Scantlebury; T.K.—Truby King.

It is interesting to note the close approximation of the curve obtained in this series with that obtained by Dr. Scantlebury. So that, although one was made in Victoria and the other in New South Wales, either might be taken as an Australian standard. Unfortunately Dr. Scantlebury has not stated the number of females and males in the 700 cards, so that a greater preponderance of one or the other would account for the slight differences observed.

Unfortunately no figures were available for Sir Truby King's graph, and the graph has not been smoothed to fit any particular curve; but despite that the curve very closely follows the other two curves, except for a noticeable dip at approximately the thirty-eighth week. This dip will be referred to again.

In Table III a comparison is made between weights obtained in this series and those obtained by Dr. Scantlebury, Sir Truby King and Dr. T. Brailsford Robertson.⁽²⁾

Dr. Robertson made his observations on 159 infants, of whom 90 were males and 69 were females, and there were approximately 412 observations.

In Chart VI Dr. Robertson's male chart is compared with the male chart of this series, and it will be seen how closely they approximate. In Chart VII the female charts are compared and again, although the figure obtained by Dr. Robertson is some eight to ten ounces lighter than that obtained in this series, there is still quite a degree of conformity between the two curves.

TABLE III.

Comparing Weights (in ounces) during First Year of Life of Australian Infants as Obtained by Different Workers.

Age.	Clements.		Scantlebury.	Truby King.	Robertson (Aust.).	
	Males.	Females.			Males.	Females.
0	130	126			128	120
2	137	131		124	140	130
4	149	144	148	138	154	140
6	162	157	160	154	166	150
8	176	170	172	170	178	160
10	188	183	184	184	189	170
12	199	193	194	198	200	180
14	212	205	208	208	212	190
16	223	214	218	218	224	200
18	232	225	230	228	235	210
20	242	235	240	236	245	220
22	251	244	252	246	255	230
24	258	252	264	256	264	240
26	265	260	272	262	272	249
28	275	267	280	268	280	258
30	282	274	288	272	287	265
32	289	281	296	278	293	272
34	296	288	304	282	299	279
36	302	294	312	288	304	286
38	308	300	318	296	309	292
40	315	305	322	304	314	298
42	320	312	328	312	317	302
44	326	316	334	320	320	307
46	331	321	340	328	323	311
48	337	328	344	336	326	314
50	342	333			328	318
52	349	338			330	321

The close approximation of the curves obtained in this series and those obtained by other workers is very gratifying. Moreover, it is felt that the differences might be accounted for by the difference in the number of observations made in each case.

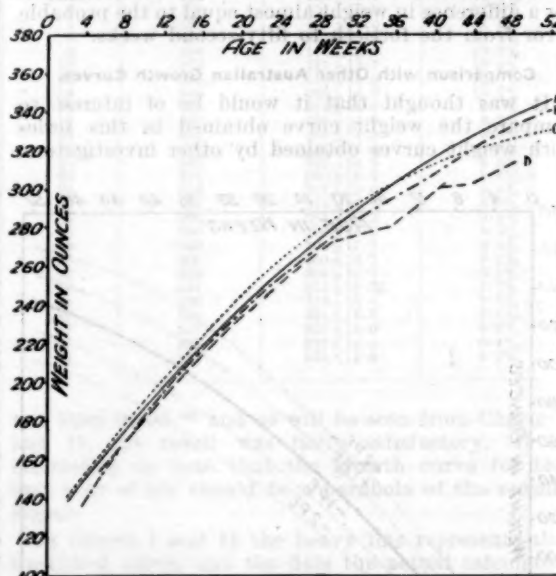


CHART VI.
Weight curve of Australian male infants as obtained in this series compared with those obtained by other workers. Key: A—Clements (Australian infants); D—T. Brailsford Robertson (English infants); C—T. Brailsford Robertson (South Australian infants); B—Camerer (German infants).

Comparison with Weight Curves for British Infants.

Table IV gives a comparison between Australian infants as obtained in this series and the weight curves of British infants as obtained by Dr. T. Brailsford Robertson,⁽³⁾ Sir George Newman,⁽⁴⁾ and Sir Eric Pritchard.⁽⁷⁾

TABLE IV.
Comparing Weight Curve of Australian Infants (this series) with Weight Curves of British Infants as Obtained by Various Workers.

Age in Weeks.	Clements.		T. Brailsford Robertson.		Newman.	Pritchard.
	Males.	Females.	Males.	Females.		
Birth	130	126				
2	137	131				120
4	149	144	147	143	123	134
6	162	157				146
8	176	170	169	159	142	160
10	188	183				172
12	199	193	193	180	161	184
14	212	205				192
16	223	214	218	202	180	200
18	232	225				210
20	242	235	233	217	204	218
22	251	244				228
24	258	252	251	235	228	236
26	265	260				244
28	275	267	268	252	244	254
30	282	274				262
32	289	281	276	258	255	272
34	296	288				280
36	302	294	282	265	268	288
38	308	300				296
40	315	305	299	273	282	306
42	320	312				316
44	326	316	303	288	295	326
46	331	321				336
48	337	328	314	287	308	344
50	342	333				
52	348	338				

Dr. Robertson's curve is a composite one. He had searched for some time in the literature for a suitable English standard, and it appears that the only one available was Sir George Newman's standard, which, as Dr. Robertson points out, is quoted in "Infant Mortality". But in "Infant Mortality" no other indication is given of the origin of this curve, except that it was such as was used by Dr. Léon Dufour at Finsbury Dépôt, in France, so presumably it is a standard for French infants. I have searched the literature of the period of Dr. Dufour's greatest

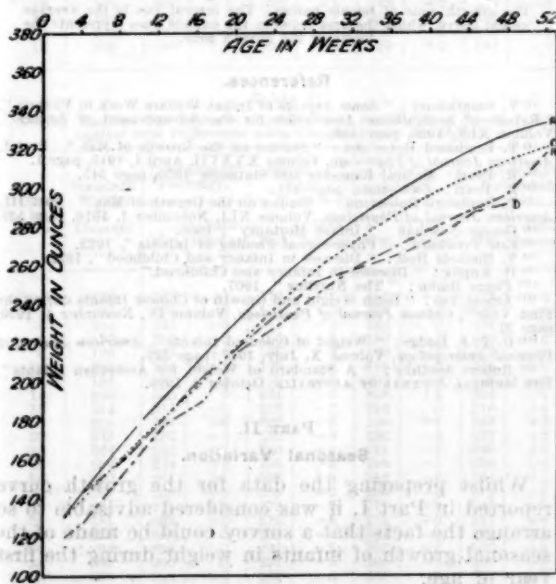


CHART VII.

Weight curve of Australian female infants as obtained in this series compared with those obtained by other workers. Key: A—Clements (Australian infants); B—T. Brailsford Robertson (English infants); C—T. Brailsford Robertson (South Australian infants); D—Camerer (German infants).

activity, 1890-1900, and cannot find any reference to this standard.

When Dr. Robertson failed to find any other curve than that supplied by Sir George Newman, he constructed one from figures obtained from Leeds and London.⁽⁵⁾ The comparison between the curve obtained in this series and Dr. Robertson's is shown in Charts VI and VII.

Comparison with Growth Curves for Foreign Infants.

Table V gives a comparison between the growth curve for Australian infants and the growth curves for foreign infants.

TABLE V.
Comparing Weights (in ounces) during First Year of Age of Australian Infants with Weights of Infants of Other Countries.

Age in Wks.	Clements.		Holt.	Koplik.	Budin.	Camerer.		Tao.	Dodge.	
	Males.	Fe-males.				Males.	Fe-males.		Males.	Fe-males.
Birth	130	126	120	122	108	120	112			
2	137	131	120	124	108				130	116
4	149	144	138	146	120	139	127	139	142	131
6	162	157	154	158	132				152	145
8	176	170	168	170	142	169	152	168	164	148
10	188	183	184	182	153				176	162
12	199	193	200	194	163	196	176	197	187	176
14	212	205	212	206	172				194	185
16	223	214	222	218	182	219	190	216	199	186
18	232	225	232	230	192				217	202
20	242	235	240	240	200	238	217	232	216	193
22	251	244	248	248	208				219	214
24	258	252	256	256	215	255	230	248	221	216
26	265	260	264	262	222				219	211
28	275	267	272	272	228	271	246	257	239	218
30	282	274	280	280	235				240	223
32	289	281	284	288	242	285	260	266	237	227
34	296	288	292	296	248				237	235
36	302	294	298	304	255	297	270	272	251	239
38	308	300	304	308	260				260	242
40	315	305	308	312	266	307	280	280	258	252
42	320	312	312	320	272				277	247
44	326	316	316	325	277	322	290	287	286	256
46	331	321	322	330	282				288	261
48	337	328	326	334	288	332	299		295	273
50	342	333	332	340	293				292	275
52	348	338	336	346	299	340	322		296	285

Included in the series is the curve obtained by T. Emmett Holt "as made up from the complete charts of 200 healthy nursing infants who were thriving and weighed every week and the incomplete charts of about 700 other infants. There are represented about 30,000 observations on children under one year." These are, of course, American children.⁽⁶⁾

The curve under Koplik's name is taken from "Disease in Infancy and Childhood", by H. Koplik, and no information is given as to the number of observations; it merely states: "Author's chart showing average weight of breast fed infants from birth to the end of the 52nd week".⁽⁷⁾ These, it would be presumed, are American children.

From "The Nursling", by Pierre Budin, who was Professor of Obstetrics at Paris, the curve under the name of Budin is taken.⁽⁸⁾ No figures are quoted to indicate the number of observations from which the graph was made. These are French infants.

In obtaining the curves under the name of Camerer no reference is made to the number of observations required to supply the data. The curves are taken from "The Diseases of Children", by Shaw and Le Fetra, from a chapter on Children's Growth in Volume I, by Dr. W. Camerer, of Stuttgart. These are German children.

For interest's sake, two other curves are added, one by Ernest Tso,⁽¹¹⁾ which is made up from 1,659 weighings of 584 Chinese infants of Peiping. The other is by C. T. J. Dodge,⁽¹²⁾ and is a curve of negro children of Cleveland, Ohio. There appears to be about 30 weighings for each age period.

It is interesting to note that some of the charts closely follow that obtained in this series, especially the American figures.

There is a definite practical value of a growth curve such as that obtained above, not necessarily as a curve, but by using it as a basis one can evolve a growth zone.

This can be done by drawing lines on either side of the growth curve and at a distance equal to *plus* or *minus* 10% of the weight at each point along the curve.

Emmett Holt has suggested that a baby falling 10% outside the average weight is abnormal. The growth zone thus obtained can be used as an absolute guide to a baby's growth progress in weight, and these zones ought to be of value to nurses and workers in baby health work.

Such growth zones are shown in Charts VIII and IX.

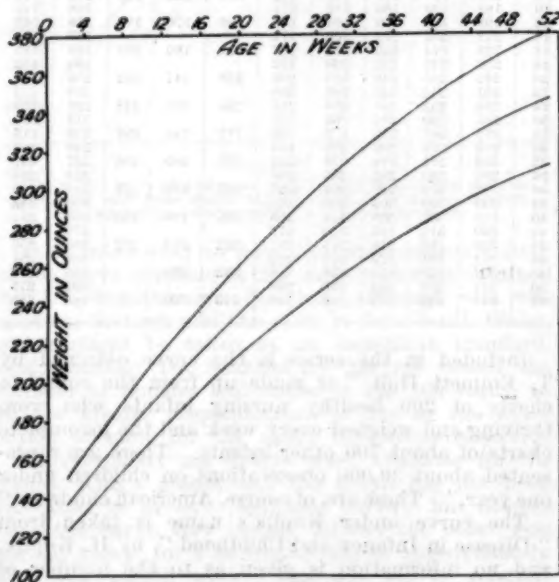


CHART VIII

The growth zone for male babies. The central line is the average weight curve, whilst the outside lines represent the limits of the growth zone.

Acknowledgements.

The author acknowledges his indebtedness to Dr. Sydney Morris, of the New South Wales State Health Department, for the facilities accorded him at the baby health centres; to Dr. Baldwin, of the School of Public Health and Tropical Medicine, Sydney, for his guidance in the solution of this problem.

Summary.

1. A weight curve for male and female Australian infants for the first year of life was obtained.

2. Thirty thousand observations were made on 1,215 infants, of whom 613 were males and 602 were females.

3. The curves obtained very closely conform to a parabola of the second degree.

4. A comparison between the curves obtained in this series and those obtained by other workers on Australian infants shows a very close approximation.

5. Comparison was also drawn between Australian, British and foreign infants.

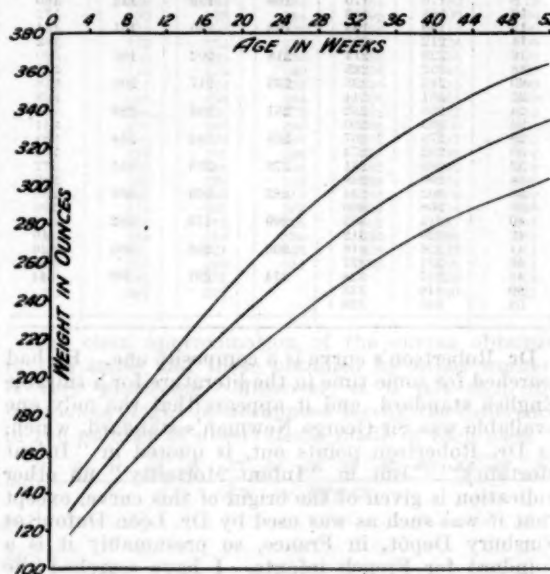


CHART IX.

The growth zone of female babies. The central line is the average weight curve, whilst the area between the outside lines represents the limits of the growth zone.

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PART II.

Seasonal Variation.

Whilst preparing the data for the growth curve reported in Part I, it was considered advisable to so arrange the facts that a survey could be made of the seasonal growth of infants in weight during the first year of age.

Compilation of Data.

The cards were arranged into groups so that those infants born in the months December, January, and

February were tabulated on one sheet. Similarly, those born during March, April, and May were tabulated on another sheet, and then those born in June, July and August were treated likewise, whilst a fourth calculation was made of those born in September, October and November. The sexes were separated, and just over 100 cards were placed in each series, thus making totals of 435 males and 424 females.

The mean averages for each age period for these groups were then struck off and the results tabulated in Tables I and II, together with the differences from the standard, as obtained in Part I.

TABLE I.

Showing Seasonal Variation in Growth Curves for Weight of Male Infants, together with Differences when Compared with the Standard.

Age in Weeks.	Standard Weight in Ounces.	December to February.		March to May.		June to August.		September to November.	
		Wgt.	Difference.	Wgt.	Difference.	Wgt.	Difference.	Wgt.	Difference.
Birth	130	122	-8	131	+1	124	-6	128	-2
2	137	133	-4	140	+3	137	0	136	-1
4	149	149	0	146	-3	148	+1	143	-6
6	162	162	0	168	+6	162	0	150	-12
8	176	174	-2	176	0	172	-4	168	-8
10	188	187	-1	189	+1	188	0	179	-9
12	199	198	-1	202	+3	200	+1	194	-5
14	212	210	-2	213	+1	213	+1	204	-8
16	223	222	-1	224	+1	221	-2	220	-3
18	232	232	0	231	-1	232	0	229	-3
20	242	242	0	243	+1	240	-2	237	-5
22	251	251	0	254	+3	252	+1	247	-4
24	258	259	+1	261	+3	258	0	256	-2
26	265	268	+3	272	+7	265	0	264	-1
28	275	275	0	277	+2	272	-3	272	-3
30	282	283	+1	282	0	282	0	280	-2
32	289	289	0	292	+3	288	-1	287	-2
34	296	296	0	299	+3	295	-1	293	-3
36	302	302	0	306	+4	300	-2	300	-2
38	308	308	0	312	+4	309	+1	306	-2
40	315	313	-2	317	+2	315	-2	313	-2
42	320	318	-2	322	+2	322	+2	318	-2
44	326	325	-1	327	+1	329	+3	323	-3
46	331	330	-1	332	+1	333	+2	328	-3
48	337	336	-1	338	+1	338	+1	333	-4
50	342	341	-1	342	0	345	+3	339	-5
52	349	346	-3	346	+3	350	+1	344	-5

TABLE II.

Showing Seasonal Variation in Growth Curves for Weight of Female Infants, together with Differences when Compared with the Standard.

Age in Weeks.	Standard Weight in Ounces.	December to February.		March to May.		June to August.		September to November.	
		Wgt.	Difference.	Wgt.	Difference.	Wgt.	Difference.	Wgt.	Difference.
Birth	126	127	+1	124	-2	125	-1	131	+5
2	131	129	-2	131	0	124	-7	135	+4
4	144	141	-3	141	-3	144	0	146	+2
6	157	159	+2	155	-2	158	+1	159	+2
8	170	175	+5	167	-3	169	-1	172	+2
10	183	184	+1	179	-4	185	+2	185	+2
12	193	192	-1	190	-3	192	-1	195	+2
14	205	205	0	201	-4	208	+3	204	-1
16	214	214	0	212	-2	214	0	218	+4
18	225	227	+2	222	-3	224	-1	227	+2
20	235	236	+1	232	-3	232	-3	237	+2
22	244	245	+1	240	-4	241	-3	248	+4
24	252	254	+2	250	-2	249	-3	256	+4
26	260	261	+1	257	-3	254	-6	264	+4
28	267	268	+1	265	-2	264	-3	272	+5
30	274	275	+1	272	-2	271	-3	280	+6
32	281	283	+2	279	-2	278	-3	287	+6
34	288	288	0	285	-3	284	-4	293	+5
36	294	294	0	291	-3	292	-2	300	+6
38	300	300	0	297	-3	298	-2	306	+6
40	305	306	+1	302	-3	301	-4	312	+7
42	312	312	0	308	-4	309	-3	317	+5
44	316	316	0	314	-2	314	-2	322	+6
46	321	320	-1	320	0	320	-1	328	+7
48	328	325	-3	326	-2	328	0	333	+5
50	333	330	-3	333	0	333	0	338	+5
52	339	335	-4	337	-2	340	+1	343	+4

In reviewing the tables, it will be noted that there are slight variations between the weights obtained for any particular season and those obtained in the standard. The variations are not regular, and are all within the probable errors of the standard. The probable error of a difference⁽¹⁾ (the greatest difference was taken as a good example —12) was calculated and found to be insignificant.

It was noticed that where there was any consistent difference occurring throughout the whole year, as in September-November males, the difference was not large, and moreover was not repeated for that season in the females.

It is interesting to note that the season in which a baby is born has no influence on its growth, and that apparently it grows at a rate closely conforming to the standard, irrespective of its date of birth.

A search of the literature failed to reveal any other such comparison having been drawn for any other set of infant weight curves.

Reference.

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BUCCAL CARCINOMA AND ITS TREATMENT.

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THE time seems opportune to review buccal carcinoma, the frequency of which is certainly not on the wane, and the treatment of which is still far from satisfactory. As regards its aetiology, whatever other factors may be operating, there can be no question of the importance of chronic irritation (for example, from an ill-fitting denture, jagged teeth, excessive smoking *et cetera*) and a history of syphilis. In the opinion of some observers the current of hot smoke projected through the cigarette holder against the palate or other part of the buccal mucosa is a more potent factor than the cigarette alone; it seems feasible. It is astonishing the lengths to which some patients allow the affection to go before consulting a doctor. Sometimes the primary lesion is small and the glandular metastasis in the neck may be considerable, in fact the glandular enlargement may be the affection for which treatment is sought.

Diagnosis.

Tuberculous ulceration (uncommon, usually multiple and painful, and secondary to pulmonary tuberculosis) seldom causes difficulty in diagnosis. Syphilis occasionally causes difficulty; a positive result to a Wassermann test does not necessarily exclude carcinoma.

With an ulcer on the lip a marked early enlargement of the glands in the digastric triangle will make one suspicious of chancre. Biopsy will prove of great assistance in doubt and apparently is not harmful (as regards metastasis); otherwise reliance may be placed on the negative effect of several weeks' treatment with mercury and iodide of potash.

Simple ulceration may occasionally cause difficulty in diagnosis, but it should heal after the removal of the offending irritant (for example, jagged tooth or ill-fitting denture).

Actinomyces more often causes its characteristic ulcerations in the skin outside, especially below the mandible.

Chronic inflammation of the sublingual gland and of the adjoining portion of the tongue must be considered. I have seen such a case treated for carcinoma of the floor of the mouth. What decided me in favour of chronic inflammation secondary to septic teeth was the absence of ulceration. Epithelioma is not present long before it ulcerates, though the ulceration may be only superficial.

Treatment.

As one who has been brought up in the school of major operative surgery and seen the triumphs, as well as the failures, of MacCormick and Maitland in this sphere, and as one who has had some success with the same methods, I must in candour admit that though operation is perhaps permanently curative, if successful, still the mortality from these methods is high and the mutilation often great. I am gradually becoming converted to the fact that it is foolish to promise a cure in buccal carcinoma, and that we should in most cases be satisfied with palliation. (Of course, I except epithelioma of the lip from this summing up; also early cases in tongue and cheek.) After a long experience of these cases it is not easy to have to make this admission.

What have we to take the place of the scalpel? The two most popular agents are radium and diathermy.

For the lip, to which it may be easily applied (preferably by needling) radium is superior to excision in its cosmetic effects (causing remarkably little loss of tissue); in curative value it is probably its equal. I have seen recurrences after each, in the case of the radium probably due to insufficient dosage. Where the lesion is not a large one, I see no virtue in replacing the scalpel; it is quicker and as sure. Of radium I generally give about 800 to 1,000 milligramme-hours, in needles; of course, a larger dose may be indicated for a larger lesion.

In the tongue, while the lesion is early, I think wide excision is indicated; the second stage of the operation is performed two to three weeks later, when the deep cervical and the glands of the digastric triangle are cleaned out. The more radical operation, by which the glands and the involved portion of the tongue are removed *en bloc*, I do not now perform. The risk of leaving involved lymphatics between the two portions taken out separately seems a slight one, and is more than compensated for by the much greater safety and lowered mortality. At the end of the older operation it was not easy to shut off the buccal cavity from the large neck wound; with resultant sepsis and occasional secondary hemorrhage. It was also accompanied by a large amount of shock.

I agree with those who think the glands should be removed second, not first.

In the more extensive tongue lesions, especially those extending on to the floor of the mouth, and in those of the floor of the mouth alone, I think it is wise to use diathermy, the glands being removed by operation. Some might prefer to use the operation for the removal of the glands as a means of access for applying radium needles to the tongue; they certainly have more chance of remaining in position applied thus than intrabuccally.

For tonsil and palate tumours surgery is practically excluded; they may be excised with the diathermy knife and the button applied to the raw surface, then left. (Of course, ether will be avoided as an anæsthetic in diathermy cases.) The glands of the neck on that side will be surgically removed. The procedure may not be ideal, but I have patients, in whom it has been done, alive and comparatively well three and four years afterwards. The diathermy, by its destruction and fibrosis, seems to cause a marked delay in the spread of the growth. It has the added virtue of relieving pain.

On the mucosa of the cheek the lesions can be subjected to radium treatment with success and with much better cosmetic results than are obtained by surgery.

As to the glands, I have already indicated that I prefer surgical removal to radiation therapy, but where they are too extensive and fixed to offer a reasonable chance of cure by operation, I have applied massive doses of radium (4,000 milligramme-hours or more) with marked relief.

Of deep X ray therapy I have not an extensive experience for these conditions. I have seen patients go down hill more rapidly after its application.

I should like to add further that the use of the sucker in intrabuccal operations has been a great advance, minimizing the risk of asphyxia and of subsequent bronchopneumonia. With the older extensive operations, laryngotomy, through which the anæsthetic was given (enabling the pharynx to be plugged), saved many a lung infection.

To sum up, then, the picture is not a bright one. The ardour to effect a complete cure by surgical excision must be often restrained, else we lose the life of our patient. We must oftentimes be satisfied with palliation and prolongation of life. This may extend to years.

THE FUNCTION OF THE SYMPATHETIC NERVOUS SYSTEM.

By N. D. ROYLE, M.D., Ch.M., F.R.A.C.S.,
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FORMERLY I attributed the effects of ramisection and trunk section to division of the sympathetic nerves supplying voluntary and involuntary muscles, but since it has been shown by Wilkinson⁽¹⁾ and others that unmyelinated nerves from the sympathetic rami do not supply voluntary muscles, some other explanation is demanded. Steele F. Stewart⁽²⁾

has suggested that the effects of ramisection are due to division of the sympathetic nerves supplying the blood vessels of the spinal cord. Let us now examine the facts of the experiments in the light of this suggestion.

PART I.

The Spinal Animal.

Experiment 1.—When the spinal cord of a goat is divided in the mid-thoracic region, there is a period of a few hours during which the hind limbs take up an extended and abducted posture when the animal is placed on its back. Reflex activity is in abeyance and the muscles of the body and limbs below the line of section are flaccid. There is incontinence of urine and faeces on account of paralysis of the pelvic nerve. As spinal "shock" passes off, the hind limbs regain tone and take up a flexed and adducted attitude. The bladder and rectal sphincters regain tone and constipation and retention of urine occur. Now the whole picture is altered by the excision of both abdominal sympathetic trunks and their connexions. The muscles of the hind limbs again become flaccid and the limbs take up an extended and abducted posture, but reflex activity is not abolished. The bladder and bowels empty immediately and continue to fill and to discharge their contents periodically. These functions go on in spite of the absence of sympathetic nerve supply. Since the sympathetic nerves are vasomotor to the spinal cord as well as to the limbs, their division leads to a dilatation of the arterioles and venules of the cord. When the spinal cord is divided, the vasomotor centres of the cord are deprived of stimulation from the vasomotor centre and acute dilatation of the blood vessels of the cord occurs. This leads to a depression of reflex activity as seen by the behaviour of the hind limbs. It is not the general lowering of blood pressure that is concerned in this action, but the state of the blood vessels of the spinal cord. With the recovery of capillary contraction, which is independent of the influence of the sympathetic nervous system and under hormonal control, reflex activity again appears and will continue as long as the animal lives. There is, however, a loss of resistance to passive movements and no delay in relaxation occurs after the knee jerks are elicited.

When the sympathetic nerves of one side were divided and the behaviour of the one hind limb was contrasted with the other, the side of the cord without sympathetic control retained reflex activity for days after the opposite side as the animal was dying.

Experiment 2.—Similar phenomena are exhibited by a normal animal from which the left abdominal sympathetic trunk has been removed fourteen days or more previously and into which adrenaline or ephedrine is injected. All limbs, with the exception of the left hind limb, remain extended for a time. In contrast to the behaviour of the left hind limb, which remains flaccid, the other three limbs exhibit increased postural activity. It appears now that this result in the left hind limb may be explained

by lessened activity of the spinal cord due to vasodilatation on the side of extirpation of the sympathetic *rami communicantes* supplying it. This less excitable state of the cord renders it a poor receptor for impulses of cortical and subcortical origin. This also explains the good results in 70% of patients following sympathetic ramisection. The increased postural activity in the three other limbs is due to increased vaso-constriction in some prespinal centre, and this must have been rendered hyperactive by greater activity of the vasomotor centre or of the peripheral part of the sympathetic nervous system.

Experiment 3.—I also found that large doses of ephedrine led to a condition resembling decerebrate rigidity.⁽³⁾ This could have been produced only by the same nervous mechanism as that producing decerebrate rigidity, that is, some disturbance of the function of a prespinal centre. Now Davis⁽⁴⁾ has shown that he can produce extensor spasm by ligating the basilar artery. His explanation is that he causes a death of nerve tissue by ligation of the artery, but it is more likely that he produces anaemia of the vasomotor centre which leads to hyperactivity of prespinal centres and so leads to exhibition of extensor spasm in the animal. The conditions imposed upon the animal by large doses of ephedrine and by ligating the basilar artery are so similar that they probably have the same cause, that is, over-activity of the vasomotor centre. On the other hand, I have been able to cause extensor spasm to cease in the human subject by division of the sympathetic trunk in the region between the first and second thoracic nerves, and this leads to a depression of the vasomotor centre as shown by the contralateral fall in blood pressure and vasodilatation in the contralateral side, including face and limbs.

Experiment 4.—The ipsilateral depression of tone of the face and neck musculature following a thoracic trunk section is an expression of decreased activity of the cervical spinal cord and of the facial nucleus of the same side.

The following changes occur in the facial and neck musculature immediately after thoracic sympathetic trunk section: (i) drooping of the eyelid; (ii) partial obliteration of the naso-labial fold and partial collapse of the angle of the mouth and as a consequence a permanent lessening of the amplitude of the smile occurs; (iii) there is diminution of tension in the muscles of the neck. For example, in unilateral operations, the ipsilateral trapezius and suboccipital muscles are slacker at their attachment to the occiput than those on the opposite side. These changes are more or less permanent, but become less evident in two or three weeks' time. For example, the eyelid, while it retains a permanent partial droop, is less drooped than immediately after operation.

Summary of Part I.

The sympathetic nerves do not directly supply voluntary muscle. The operation of sympathetic ramisection, by decreasing the constriction of the

blood vessels of the spinal cord, increases the blood supply and so depresses reflex activity. This accounts for the changes in the muscles of laboratory animals and in the human subject after the removal of sympathetic nerves. The vasomotor centre, on the other hand, acting on prespinal and spinal centres, may, by its increased activity, cause hyperactivity of these centres. This accounts for the increase in postural tone seen in decerebrate animals and in patients with spastic paralysis when they attempt voluntary effort, for voluntary effort is accompanied by stimulation of the vasomotor centre.

PART II.

The Effects on the Viscera.

The following experiment was carried out by Dr. S. Harry Harris and myself in 1927. The spinal cord of a normal goat was divided in the mid-thoracic region. For a few hours there was loss of tone in the sphincters of the bladder and rectum. This was followed by constipation of the bowel and incontinence of overflow in the bladder. On excision of the abdominal sympathetic trunk of both sides there was an immediate restoration of emptying of the bladder and the bowel resumed regular evacuations. Now this effect may be explained in two ways: (i) There is a mutual antagonism of action between the vagus and pelvic nerves on the one hand and the sympathetic nerves on the other hand. When the sympathetic action ceased, its inhibiting influence was removed and the contraction of the bowel was allowed to go on, but the bladder and bowel filled and emptied in the absence of sympathetic activity and therefore it is not necessary for these processes. Let us look at the other explanation. (ii) With the division of the abdominal sympathetic trunk and its connexion there follows a vasodilatation of the spinal cord depressing the activity of the cells subserving vasomotor impulses. This would produce vasodilatation of the viscera as well as in the ipsilateral limbs. Coincident with this is a return to normal activity in the ganglion cells of the bladder and bowel. It does not matter whether the activity of the sympathetic centres of the spinal cord are inhibited or the nerves going to the viscera are cut, the effect will be the same, that is, vasodilatation and increased blood supply in relationship to the ganglion cells of the viscera. The effect of sympathetic thoracic trunk section in relieving constipation and frequency of micturition, as it has done frequently in congenital mental deficiency and in disseminated sclerosis, is probably due to a decreased activity of the vasomotor centres leading to a depression of activity of sympathetic centres of the spinal cord, since there is a contralateral depression of diastolic blood pressure. This also leads to a freer blood supply and increased activity in the viscera.

Now nerve cells work normally when a moderate degree of vasodilatation is present. Hyperactivity is due to vasoconstriction and depressed activity is due to stasis from intense vasoconstriction of arterioles and venules which would be

present when the sympathetic nervous system is over-active. The nerve cells of the wall of the bladder and bowel have thus the vascular condition of normal activity restored to them by the division of the sympathetic nerves or thoracic sympathetic trunk section. The resumption of normal activity immediately is an established experimental and clinical fact. This fact is shown by the experimental results recorded in this paper, and clinically by the relief of symptoms of Hirschsprung's disease and chronic constipation. The bladder and bowel are able to function without any sympathetic supply at all. The only noticeable difference in function is a slightly increased rate of evacuation. The suggestion I now put forward is that the muscles of the bowel are innervated by the vagus and pelvic nerve, and that the musculature of the bladder is dependent on the pelvic nerve, while the sympathetic nerves simply alter the vascular conditions under which the ganglion cells of the walls of the bladder and bowel work. The voluntary control of muscles of evacuation after sympathetic ramisection or thoracic trunk section in the case of the bladder and bowel is easier than before operation on account of the decreased vasoconstriction of the spinal cord and a return to more normal vascular conditions.

The Heart.

The heart has also ganglion cells capable of being influenced by alteration of blood supply. It is well known that stimulation of the sympathetic nerves leads to increase of the rate of the heart beat. The end-result of stimulating the sympathetic nerves is not usually considered, but probably in the heart, as in the body generally, the sympathetic is concerned with regulating the blood supply. Excessive stimulation of the sympathetic could lead to heart failure, as seen in the sudden death of goats following large doses of ephedrine, by causing intense anæmia of the heart. Moderate activity of the sympathetic could lead to an increase in the rate of the heart beat by producing the vascular conditions necessary to stimulate the ganglion cells of the heart. The heart works quite well in the absence of sympathetic action, as is shown by those patients who have had both superior thoracic sympathetic ganglia removed. This operation effectively removes the sympathetic fibres coming from the superior thoracic ganglion itself and all the fibres which pass through it to the cervical ganglia. The heart rate is slower after removal of the superior thoracic ganglia, but patients play tennis and other vigorous games with acceleration of the heart rate and without any discomfort. The increase in rate of cerebral circulation following thoracic sympathetic trunk section should lead to a decrease of vagal action and thus to an increase of heart rate, but it does not do so. Therefore, in the heart the vagus, I think, is concerned with regulation of the rate and the sympathetic is normally only concerned with alteration of blood supply and thus it controls and regulates the vascular conditions of the different phases of activity of the ganglion cells of the heart.

CONCLUSIONS.

1. The results of sympathetic ramisection are explained as due to alteration in the circulation of the spinal centres.
2. The effects of sympathetic thoracic trunk section are due to the alteration of circulation of pre-spinal centres, particularly the vasomotor centre.
3. The sympathetic does not directly innervate the viscera, but effects alteration in function through alteration of blood supply. This applies to both abdominal and thoracic organs.

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EXPERIENCES IN RADIATION IN CANCER IN THE FEMALE PELVIS.¹

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Sydney.

AND

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THE title chosen for this review suggests a very comprehensive and detailed account of the subject. That is not the aim of this communication, because we are limiting ourselves to the discussion of methods employed by us in jointly treating by radiation carcinomata of the vulva, ovary, body of the uterus and the cervix of the uterus, together with comments thereon, and comparison with methods and results published elsewhere. Most of the patients have been treated in the gynaecological wards and the deep X ray clinic at Saint Vincent's Hospital, Sydney; and the follow-up has been made fairly easy by the regular visits of patients at the weekly cancer clinic consultations at that hospital.

There are no beds specially reserved for cancer patients in the gynaecological wards of Saint Vincent's Hospital. We believe that it is not possible to treat any number of cases of cancer of the cervix by the Heymann technique in the general wards of a hospital, as it is difficult to arrange for the return of patients to hospital in seven and twenty-one days when all beds are kept continuously occupied, and patients with emergency conditions

must be admitted at all hours. It would seem that this technique must be reserved for special cancer hospitals or clinics with indoor accommodation. Hence we present no figures or results of cases treated by this method. We believe, however, that the gynaecological wards of a general hospital, with their examination and treatment rooms and trained interne staffs and associated pathological and biological laboratories, otherwise lend themselves well to the treatment of cancer of the organs of the female pelvis. Moreover, the gynaecologist's mind tends to remain open under these circumstances to receive new ideas which have been proved of value and not to get an undue bias either in the direction of surgery or irradiation methods.

From these general considerations we can now pass to the more detailed account of the different types of cancer within the female pelvis treated by us.

Carcinoma of the Vulva.

We have treated thirteen patients with *carcinoma vulvae*. Eight are alive and well, with no apparent sign of disease. We have lost trace of three, and two have died from metastases after apparent cure of the primary lesion.

Reviewing American and some of the Continental literature, we find that Ewing⁽¹⁾ states that carcinoma of the vulva represents 10% of all cancer in women, the average age incidence being 57.24 years.

It is said that five-year cures following surgical operation are disappointingly small, averaging less than 10%, and consequently most centres have turned to irradiation methods for assistance. One of us has had very happy results from operation in these cases, the technique being the block operation, removing in one mass vulva, *mons veneris* and glands from both inguinal regions and all adjacent fat tissue from one anterior superior iliac spine to the other. Two patients are alive and well fifteen and ten years afterwards, in addition to others operated on at a later period.

In advanced cases, and later we may be able to say in all cases, we favour X radiation of the whole area of the vulva and gland drainage, and after an interval of three or four months, according to the type of reaction in the particular individual, we then perform the radical operation as briefly described above. One great advantage from preliminary radiation is that the ulcer is healed at the time of operation, so the risk of gross sepsis is avoided. However, it is undesirable to perform the operation at any time during a period of less than three months after the radiation. The blood supply to the flaps and underlying parts is then severely interfered with by the radical operation.

If in addition to this there has been recent irradiation, there may be failure of the whole or part of the flaps to unite, with necrosis of underlying tissue. Such a condition happened in one of our patients who died from metastases. It considerably interfered with her convalescence.

¹ Read at the Fourth Australian Cancer Conference, Canberra, March, 1933.

In all cases in which operation has been performed by one of us after X radiation by the other, the pathological examination revealed such an altered appearance of the original malignant ulcer that either no cancer cells were demonstrable or else only cell nests in the deeper layers of the tissue removed, but in all cases the glands were heavily metastasized. The glands had not been irradiated.

One patient, whose condition had been regarded as inoperable by a competent surgeon, was treated by X rays. The ulcer, which had been present eighteen months, healed. Six months later we performed the radical operation. There was not a sign of any cancer cells in the vulva when removed, although the original ulcer area was approximately two and a half square inches and the patient felt suicidal on account of pain. The glands were infiltrated with growth and adherent on one side to the femoral vein. She is now (twelve months after operation) apparently in good health, has no pain or discomfort, and has put on much weight. In the first instance we had applied X rays only as a palliative measure, but the healing of the ulcer encouraged us to attempt a complete cure.

We believe that scalpel dissection is the best treatment for the upper part of the operation, but electro-surgery is very suitable for the removal of the vascular tissues of the vulva. We have not used radium in the radiation treatment of cancer of the vulva.

There are three problems in cancer of this region: (i) destruction of the local lesion, which is simple; (ii) destruction of the residual cancer cells in the tumour-bearing area, which is more difficult; (iii) destruction of metastasized inguinal glands, which is extremely difficult.

In this pre-operative irradiation the voltage, filtration and distance are not so important as the total quantity of radiation administered, because the lesion and the glands are superficial, and, we think, the maximum toleration dose should be given in one sitting to the local lesion and in divided doses to the regional lymph glands.

We have only two cases which we are counting as probable cures under this technique, but we believe it to be the rational treatment.

Cancer of the Body of the Uterus.

We have in our statistics eleven cases of adenocarcinoma of the body of the uterus. Seven patients are alive and well; of these, three had local recurrences after hysterectomy, and four had post-operative radiation following hysterectomy. Three have died from far-reaching metastases, and one patient failed to report.

It is a well known fact that cancer of the body of the uterus is usually cured by operation, if the patient is seen reasonably early. Yet all gynaecologists have had experience of patients of this type who have had early recurrences, although the growth seemed small and limited to the uterus which was widely removed. We are definitely of opinion that all patients would have a better chance of recovery if they had post-operative radiation. If the growth has broken through the uterus, we feel that radiation will prolong life.

Cancer of the Ovary.

In ovarian cancer we have met with encouraging success, and we have failed to find in the literature at our disposal anything either in support or negation of our results. We have a series of twenty-one patients all sent to us with secondary masses in the abdomen. We showed these patients at a clinical meeting arranged by the New South Wales Branch of the British Medical Association at Saint Vincent's Hospital last year.

Six are alive and well and free from any apparent lesion, four are feeling well and are working, although they still have signs of the disease, which is not advancing. Four showed decided local improvement. One has failed to report, and six patients with advanced cancer died before completing the course of treatment. As a result of our observations we are of opinion that if the surgeon removes as much as possible of the primary growth, radiation not only prolongs life to optimistic limits, but in some cases accomplishes a cure.

In making this statement we are well aware that a warning note should be sounded in the matter of operation in advanced cases. It is a matter for judgement and experience on the part of the surgeon to know in which cases an attempt should be made to remove the mass. It is for the surgeon to judge whether he can complete the operation without risk of the patient dying on the table, for in many of these cases, having once embarked on the operation, the most skilful operator cannot beat a retreat, and proceeding with the task brings tragedy.

However, our results have justified us in saying that an exploratory operation is justified except in very advanced and cachectic cases, and the opportunity should be taken to snip a piece of tissue, especially of small metastases on the peritoneum, for biopsy.

All our cases in which the abdomen has been opened have been checked by biopsy.

One very interesting patient was shown by us at the British Medical Association clinical meeting referred to above.

The abdomen was opened and the main mass of carcinoma was removed. Secondary nodules were studded on the peritoneum. After opening the abdomen it is a common experience that the tumour advances rapidly, taking on bush fire pace in its growth, so much so that a gynaecologist considers himself lucky if he gets the patient home alive in many cases, even though she may have had no more than an exploratory laparotomy. For this reason it has been our custom to start X ray treatment at the earliest possible moment. In the patient under review X ray treatment was started in the third week after operation. As the scar was weak and it was feared that X rays might have a detrimental effect on the new cells in the scar, and more especially as fluid was commencing to collect in the abdomen and so cause the scar to be further weakened, a lead screen in the shape of a strip of lead was placed along the scar during the irradiation. Seen six weeks later, no mass was felt anywhere in the abdomen, although large masses had been felt at the commencement of treatment. However, there was present a mass oblong in shape and in width little more than the lead screen along the whole distance beneath the scar. Accordingly irradiation was applied to this area, the rest of the abdomen being protected, and the whole mass disappeared. The patient continues well over a period of three years.

The time elapsing since the commencement of treatment in these cases was previously published by us, in detail. It varies from one to five years. The types of tumour were malignant cystoma and adeno-carcinoma (solid tumour) of the ovary.

Cancer of the Cervix.

In Australia today there are three methods of attacking cancer of the *cervix uteri*: (i) Wertheim operation, (ii) radiation (radium *plus* X rays), (iii) radium followed by Wertheim operation.

In many of the most famous clinics of the world radiation methods alone are used for all stages of cervical cancer, including Stage I. This method of treatment was adopted because of the high mortality following the Wertheim operation, which, after all, is an adventure of the first importance both for patient and operator. Dr. Victor Bonney's figures have been the best so far published, giving an operation mortality of 9%. Dr. E. T. Thring, at a recent meeting of the Section of Gynaecology and Obstetrics of the New South Wales Branch of the British Medical Association, stated that his mortality rate after the Wertheim operation was 3%. Primary mortality rates are as high as 17.2% to 25% (Memorial Hospital, New York), whereas the rate for radiotherapy is given as 8%. We believe this last figure should be reduced to nil by making a proper study of the patient's condition, including the flora of the vagina, the condition of the blood, especially its haemoglobin and cell content, and by prescribing suitable remedies when necessary before irradiation. Radiation should never be used when there is pus in the pelvis, for example, pyosalpinx and pyometra. These conditions should be treated by surgical operation first and then radiation methods should be applied. In our own small series there has not been any primary mortality following irradiation by radium and X rays. In this city of Sydney the mental bias of women generally seems to be in favour of surgery, as they say they would like the "cancer cut right out". This is probably a result of the influence of medical opinion in the past. We find women are disappointed when we suggest radiation for cancer of the cervix, though they welcome radium and X rays for non-malignant conditions, such as uterine fibrosis with haemorrhage.

As this article is dealing primarily with radiation treatment, we shall submit the statements of well known authorities and make an attempt to assess the value of their results.

There does not appear to be any dispute regarding surgical technique, and our present problem is the Wertheim operation against irradiation. We have no personal experience of combined radium and Wertheim operation, except in one case referred to us by a distinguished radium expert, who was unable to give an adequate dose into the cavity of the uterus on account of mechanical difficulties. Generally speaking, the method does not appeal to us at present, although we have had some excellent results from the Wertheim operation in Stage I

followed by deep X ray therapy. These cases are not included in this series under discussion.

In studying published records we find Dr. Victor Bonney's figures for absolute cure are higher than the absolute cure figures of the radiotherapeutic clinics, but we must remember that all patients operated on by him are mainly in Stage I, with a fewer number in Stage II, whereas radiation treatment also includes those in Stages III and IV.

The Mayo Clinic states that it is easy to treat carcinoma of the cervix in its early stages by radiotherapy, and that nothing else is necessary, and later on in the disease no other treatment is of any avail.⁽³⁾ Their five-year cure figures are interesting:

Stage I	84%
Stage II	72%
Stage III	19%
Stage IV	0%

Their irradiation technique is radium first, followed by deep X ray therapy after an interval of two to three weeks. Another point of interest is that in a total number of patients seen by the gynaecologist, 96% can be treated by radiotherapy, whereas 64% is given as the operability figure.

As radiotherapy is a relatively new science, we must expect different techniques in different centres, each worker trying to improve the standard. We have all realized that the principle underlying the radiation treatment of the lesion is to deliver the maximum possible dose; whether we do this in as short a time as possible or spread it over a long period is not yet decided. Professor Regaud's brilliant results have come from applying the radium dose over a relatively long period. We hope more to approximate his technique when the radium available to us has been reconditioned.

We have learned to expect better results if we crossfire with radium and X rays the entire cervical lesion *plus* the lymphatic drainage area through which the disease spreads from the primary focus.

The League of Nations⁽²⁾ thought it worth while to institute an inquiry for the collection of information regarding the best method of treatment of cancer of the cervix as practised in the leading centres in Europe. This information was given from the Radiumhemmet, Regaud Clinic, and the Frauen Klinik, Munich. The report is very valuable, and one cannot refrain from quoting Professor Döderlein:

In assessing 3,000 cases over 20 years, radiotherapy does everything radical surgery can do except that it is less dangerous and less drastic.

In his clinic from 1924 to 1926, 418 patients were admitted and only 3.3% were refused help. Ninety-seven patients (24%) were alive and well five years later. At Frauen Klinik, Munich, a preliminary irradiation of the pituitary body is always given and then X rays followed by radium; they state their absolute five-year cure figure as 25%.

At the Frauen Klinik, Munich, no case of cancer of the cervix has been treated surgically since 1913, and experience has taught them that radium should

be combined with deep X ray therapy. Their five-year cure figures are expressed by stating that out of one hundred and fifty patients with operable lesions treated by radium alone, 52.6% are alive and well, whereas the addition of X rays has brought it up to 78.5%.

Again, at the Bellevue Hospital, New York City, where the Regaud technique is employed, they state that never has a Stage I patient been referred for treatment.⁽³⁾

The workers at the Radiumhemmet, Stockholm, state that their present technique is radium *plus* X rays, because their past experience has taught them that only very rarely will radium by itself effect a cure.

The following techniques will be referred to with brief comment.⁽⁴⁾

1. Erlangen Clinic we know and have ourselves at one stage attempted the massive dose technique, but only in very rare and tolerant cases, in our opinion, is it permissible. X rays alone are given, and 9% is stated to be the five-year cure.

2. The Marie Curie Clinic in London is too new to give any figures; its workers are following the Regaud technique as far as possible.

3. At Radiumhemmet a dose of 2,200 to 2,600 milligramme-hours is given into the uterus and 4,500 milligramme-hours into the vagina. The filtration is equal to three millimetres of lead, and the five-year cure is given as 26%. They always follow up by deep X ray therapy.

4. At Madame Curie Foundation, Paris, they give radium and X rays or radium bomb—8,000 milligramme-hours *in toto*. The five-year cure is stated at 33%.

5. Mount Vernon is the new radiotherapeutic centre in England. They are using 25 milligrammes into the uterus, filtered through 1.5 millimetres of lead rubber, and ten 6.25 milligramme tubes placed in the vagina in a butterfly pessary around the cervix and fornices. They always follow up with deep X ray therapy in six to eight weeks.

The question arises whether one should apply X rays or radium first.

In the Memorial Hospital, New York,⁽⁵⁾ where irradiation is the method of choice, X rays are always administered first, and ten days after completion the patient is admitted for radium, the vaginal application being given first and followed in twenty-four to forty-eight hours by the uterine.

Professor Lacassagne, of the Madame Curie Foundation Clinic of Paris,⁽²⁾ states that their method is radium *plus* distance radium or deep X rays, but in the majority of cases the X rays are given first, except in those very early cases in which radium alone is prescribed.

We now present our own figures covering a period of four years. We are humbly conscious of the small number in comparison with more populous centres, nevertheless they represent all who applied for help.

We know that patients did not suffer undue delay in securing admission to hospital, as the admitting

department marked them urgent and consequently they received preference over all patients with chronic conditions.

Eighty-nine patients presented themselves for treatment and were treated; 67 of these were given radium followed by deep X ray therapy; 27 (41%) are alive and free from disease; 22 show local improvement; 25 died from metastases after showing local improvement; two have shown marked improvement, but their fate has been hanging in the balance for twelve months; six did not improve; five were lost trace of; two died from other causes after apparent cure.

No patient of Stage I presented herself for treatment, only fourteen of Stage II; the rest were in Stages III and IV.

We both feel very strongly about the modern problem of short wave length therapy in the treatment of this type of cancer. Extra filtration is imperative if we wish to improve our results. One of us knows she must have it for her radium. The other is endeavouring to deliver by increased voltage the shorter X ray waves and to cut out all but the desirable ones by a filtration up to three millimetres of copper, and we hope, within the next twelve months, to achieve more than has been accomplished in the previous three years.

The reason for this statement is that, of our 27 apparently cured patients, 20 have been treated through two millimetres of copper, against the former one millimetre. We feel confident that the idea of utilizing the shortest wave length therapy at our disposal will improve our results, and we are going on these lines in our further effort to try and combat this problem. The future alone will tell us how far to go.

The radium used has been issued to the hospital by the University of Sydney Cancer Research Committee and supplied by the Commonwealth Government. The deep X ray machine used is a Victor mechanically rectified plant, and has been supplied to the hospital by the University of Sydney Cancer Research Committee. The dose of radium used in cancer of the cervix has been determined rather by the nature of the tubes available than by our own choice. The patients are always specially examined by one of us the day before the application of radium, and a conclusion arrived at as to their fitness for radiation.

This includes consideration of the amount of local sepsis, the general condition of the patient, blood count, examination of the urine and of the mental state. An anæsthetic is not used as a routine for the application of radium in the uterus, but if the patient is nervous and "highly strung", or if the growth is extensive and painful, ether is given by the open method. In other cases hypodermic injection of morphine is given one hour before the patient comes to the theatre. Gas and oxygen would be an ideal anæsthetic, but its expense precludes its general use.

A small piece of tissue near the growing edge is removed for microscopic examination after the intrauterine tube has been introduced, but no

diathermy or cauterizing of the ulcer is employed; only general cleansing methods are used.

The principle behind an application of radium to cancer of the cervix has been to give a small dose over a long period.

We have used tubes containing ten milligrammes of radium element, filtered by one millimetre of platinum. Two or, if possible, three of these are placed in a rubber tube end to end and inserted into the uterus and one is placed in each lateral fornix encased in cork and surrounded by a thin sheet of rubber which is tied by a long silk ligature. Large silk ligatures are tied round the uterine tubes; the unit is kept in position by a vaginal pack of plain sterile gauze, it being felt that the action of irradiation on iodoform or other medicaments may cause local burning or at least intense inflammation. We leave the tubes in for six days, making a total dose of 5,760 milligramme-element-hours. In our earlier cases we left the tubes in for seven days, and in one some necrosis resulted in the walls of the uterine cavity, and in two there were signs of rectal irritation. The dose was then 6,720 milligramme-element-hours.

We are of the opinion that it is desirable to have greater filtration, especially in the vaginal tubes, and we would like a filtration of at least 1.5 millimetres of platinum. We would also like to add two five-milligramme tubes of the element filtered by 1.0 or 1.5 millimetres of platinum so that the dose could be delivered from four foci in the vaginal vault. The five-milligramme tubes supplied to us have a filtration of only 0.5 millimetre of platinum, and we feel that it is unsafe to use these in the vagina for as long as six days. We hope that increased filtration will be arranged in the near future, and we look forward to better results in consequence.

In our early cases we changed the vaginal dressings daily, but now we apply fresh dressings twice during the six days. The patients are happier as a result, as the vagina and vulva became very tender, as they did not tolerate much handling easily. Patients are given a douche and a hot bath when the radium is removed, and unless there is some contraindication, they leave hospital the following day.

The next step is to report at the deep X ray clinic the following Monday after their discharge. We always aim at commencing the first course of deep X ray therapy within one to two weeks after removal of the radium. They are treated according to the following technique: 200 kilovolts, 15 milliamperes, 50 centimetres focal skin distance, through four oblique ports of entry, using 2 millimetres of copper filtration.

Patients are treated every day or every second day, according to general reaction, until 1,600 r have been delivered on the skin of each of the four areas. They are then given two months' rest, at the end of which time they report for progress examination, and then monthly to three-monthly intervals are given. At the end of four to six

months another similar course is delivered. The follow-up system for each patient is mapped out according to the progress gynaecological examination. We are pleased to report that we have some patients to whom we have given permission to absent themselves for twelve months.

During this period all patients are instructed to continue vaginal douches of water or saline solution for at least six weeks following the last treatment. We believe this prevents the formation of vaginal adhesions and atresia.

Whilst patients are reporting regularly at the consultation clinic, they are seen by both of us together and records are kept, and the general services of the hospital are open to us for any necessary examination, such as diagnostic radiological examination when we suspect metastases, pathological and bacteriological examinations, and social services. This, of course, applies to all cases of cancer, not only cancer of the cervix.

In these cases our standard for "free from disease" is that the patient should have no pain, discharge, or bleeding; there is no ulcer; the body of the uterus should be free and movable and no mass or thickening should be felt in the parametrium, or enlarged glands in the obturator area or elsewhere in the pelvis. The cases we class as "local improvement" represent healing of the ulcer, but with thickening or a mass remaining in the parametrium.

Our experience shows us that these areas of thickening are likely to contain cancer cells.

In conclusion, we feel that our results are encouraging, and we look forward to even better results with cancer of the cervix in the future, with the improvements we have suggested in the conditioning of radium used by us and with the treatment of cases diagnosed earlier.

We feel we have made a definite addition to the knowledge of the treatment of cancer of the ovary by our researches in treatment with X rays in this disease, which has previously been regarded as a hopeless condition, and we believe we have found the ideal treatment for cancer of the vulva by X radiation followed at a safe interval by the radical operation.

Acknowledgements.

We desire to thank all those members of the staff of Saint Vincent's Hospital, Sydney, who made our work possible, including the Sisters of Charity, our colleagues in special departments, the nursing and technical staffs, with all of whom we have worked in harmony for the good of the patient and the study of cancer.

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Reviews.

PSYCHOANALYSIS.

DR. FRANK ALEXANDER, who claims to be the first person to hold a professorship of psychoanalysis in an American university, in his book, "The Medical Value of Psychoanalysis", has outlined what he believes to be its place in medical science.¹ Dedicated to Freud, it has a viewpoint not unnaturally entirely of his school. Although the author is optimistic in his remarks as to the manner in which the Freudian doctrine has broken the back of criticism, it may be questioned if he has sufficiently realized that much of the adverse comment has arisen on account of the premature and now admittedly erroneous early deductions. The present vintage differs markedly from its predecessors. Perhaps the initial overstatements were necessary in order to obtain recognition, but it is questionable if partisanship at this stage serves a useful purpose. Since Freud's position in the hall of medical heroes is now secure, there is no need for argument on the topic; the great necessity is for the correlation of conflicting schools. None the less, Dr. Alexander must be congratulated on creating a useful summary of Freudian literature. He deals most specifically with the discovery of free association, the theory of repressions and instincts, the Oedipus complex, the development of ego-psychology. The presentation of the ego concept is particularly clear and is illustrated by simple diagrams.

The clinician will read with interest the chapter on the correlation of psychological and physical states. A case history is shown in which symptoms of a peptic ulcer were produced by emotional causes. In support of this contention is quoted Cushing's belief that parasympathetic stimulation in mid-brain centres can produce physiological changes in the stomach.

Most impressive is a case in which habitual constipation was cured by psychoanalytic means. The wife's domestic disharmony at the hands of a selfish and loveless husband resulted in an infantile reaction, to wit, faeces holding. After the husband was instructed to mend his ways, she automatically gave up the bad habits and banished the enema and purgative.

The last chapter deals with the vexed question of psychoanalysis in medical education. Whilst few will deny that the student must increasingly recognize the psychological approach, the practicability or desirability of his own didactic psychoanalysis as suggested is highly questionable.

SURGERY OF THE RECTUM.

DR. W. B. GABRIEL is to be complimented on his book, "The Principles and Practice of Rectal Surgery", which is really an expression of the work carried out at Saint Mark's Hospital for Diseases of the Rectum, London—a hospital well known to most Australian medical graduates who have studied abroad.²

The book can be recommended to the student, general practitioner and specialist for the sound principles enunciated, the simple classification of the various rectal and anal diseases and the methods employed for their relief.

At the outset the importance of thorough examination is insisted upon and the frequent association of an undiagnosed carcinoma with piles, fissure and fistula is stressed.

We question the wisdom and necessity of putting a tube into the rectum packed round with gauze after operations on the anus. Gauze is very painful to remove and a tube is very uncomfortable. With proper preoperative prepara-

tion of the patient and correct hæmostasis a tube should not be necessary, and we think with Binnie that gauze in the rectum should be reserved for malefactors and personal enemies.

The author points out the great necessity for cleanliness round the anus after operations and recommends wet dressings. We think moistness round the anus is to be avoided, and generally more good will result from washing the part with a weak antiseptic lotion and drying and then applying some antiseptic powder.

Anæsthesia is fully and fairly discussed. The author prefers low spinal anæsthesia as a routine for anal operations.

The author still finds that approximately 25% of piles are better treated surgically. Simple ligature is the operation favoured, but we think Mitchell's method worthy of mention.

In an interesting chapter on stricture of the rectum the author mentions some cases of stricture he has met following the application of radium to the cervix uteri due to submucous infiltration.

Surgeons will find great interest in the discussion on treatment of cancer of the rectum. We feel strongly that no radical operation should be undertaken unless a laparotomy is first performed, for many cases which appear from an examination *per anum* to be early, have proved on laparotomy to have extensive secondary growths in the lumbar glands and higher. The author swings solidly behind Lockhart Mummery, who has always been a keen advocate for excision by the perineal route in opposition to Ernest Miles and his scientifically planned abdomino-perineal approach.

Of the two approaches Miles's operation certainly has the advantage of thorough exploration, allows of more bowel resection, of higher ligation of the inferior mesenteric artery with removal of glands up to the bifurcation of the aorta, and thus more thorough eradication of the invisible lymphatic spread. Miles has now reduced his mortality rate to under 8% and recurrence rate to approximately 20% for adenocarcinoma.

Perineo-abdominal excision is discussed, but has little appeal over Miles's operation. We feel that perineal excision should be reserved for those cases unsuitable for excision by Miles's operation.

The technique of applying radium and its elements is fully discussed and its dangers are mentioned, and finally an excellent chapter on the formation and the after-treatment of the colostomy rounds off a work worthy of a great hospital.

A TEXT BOOK ON MASSAGE AND EXERCISES.

"MASSAGE AND REMEDIAL EXERCISES", by Noel M. Tidy, is described as "a Text Book for Senior Students, for Those Recently Qualified and for Junior Teachers in Training for The Chartered Society's Examination".³

The book is excellent for the object stated; it contains more than is needed by the massage student in the ordinary course. The subject matter is well arranged and indexed and the value of the text is enhanced by many excellent illustrations. A great number of the illustrations are from motion pictures which have been chosen to convey the idea of the movement aimed at and which succeed admirably in so doing. If a fault is to be found it is one common to many books written from a special viewpoint. There is a tendency to give particular directions as to the massage *et cetera* given to the patient and sufficient emphasis is not laid on the necessity of encouraging the patient to perform active movements. One other omission is striking and that is the absence of any reference to the value of diathermy, although other electrical methods, such as faradism and galvanism, are mentioned. The section on the nervous system is excellent.

The author is to be congratulated on having so well arranged so much matter within the limited space of 423 pages.

¹"The Medical Value of Psychoanalysis", by F. Alexander, M.D.; 1932. London: George Allen and Unwin, Limited. Demy 8vo., pp. 247. Price: 10s. 6d. net.

²"The Principles and Practice of Rectal Surgery", by W. B. Gabriel, M.S., F.R.C.S.; 1932. London: H. K. Lewis and Company, Limited. Royal 8vo., pp. 256, with 118 illustrations, including eight coloured plates. Price: 30s. net.

³"Massage and Remedial Exercises in Medical and Surgical Conditions", by N. M. Tidy; 1932. Bristol: John Wright and Sons, Limited. Demy 8vo., pp. 441, with illustrations. Price: 15s. net.

The Medical Journal of Australia

SATURDAY, MAY 6, 1933.

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Authors who are not accustomed to preparing drawings or photographic prints for reproduction, are invited to seek the advice of the Editor.

THE JOURNAL AND ITS FUNCTIONS.

WHEN a number of people band themselves together to form an organization, particularly if the organization be formed for the study of a scientific subject, they generally try to strengthen the bonds of union by publishing a journal. In such a journal the proceedings of the organization are recorded together with data bearing on the subject at issue culled from outside sources or contributed by members. The journal thus becomes the link between members, it serves to call them either to labour or to refreshment, and is, or should be, to them a constant reminder of the objects of their organization. Medical practitioners in all parts of the world form themselves into groups, societies and associations for the study of one or other of the branches of medicine. Sometimes the groups are relatively small and are concerned with one aspect of one of the so-called medical sciences; sometimes the groups are larger and the range of subjects studied is much larger. It is thus easy to understand how so many medical journals have come into existence in different parts of the world. In Australia since the earliest days medical journals have been published; many of them arose, served their purpose and were superseded by others.

As the members of the medical profession became more numerous and more united, the journals in turn became more firmly established, and when the Federal Committee of the British Medical Association in Australia welded the Branches into one body this journal came into being. THE MEDICAL JOURNAL OF AUSTRALIA is thus built on a sure foundation; and should be the personal concern of every member of the Branches in Australia.

On several previous occasions the relation of members of the Branches to the journal has been discussed in these pages. Many aspects of the work of the journal have been mentioned. In this instance it is proposed to refer to the journal in its twofold aspect as it appears from week to week. Each issue consists of two parts—the reading matter, devoted to everyday questions in medicine and to the higher flights in purely scientific realms, and the “Advertiser”, also devoted to questions of everyday concern and to scientific apparatus, equipment and medicaments.

Of the reading matter little need be written. Very rarely are murmurs heard nowadays from the non-scientifically minded that certain contributions do not fall within the scope of their practice or are beyond their comprehension. Members of the Branches are realizing that, though this journal is primarily a general practitioner journal, it must open its pages to members who practise specialties. Radiologists, for example, are entitled to find in the pages of their own journal original observations by Australian workers on such subjects as the effects of radiations of different wave lengths, and pathologists would have every right to complain if they always looked in vain for any mention of morbid anatomy or immunology. We are bold enough to claim that the balance between contributions of different types is fairly well maintained. As far as the reading matter is concerned, the Editor would like it to be known that he is always glad to receive constructive criticism from any reader.

Turning to the “Advertiser”, we must explain that the term reading matter, applied to the non-advertising section of the journal, is used for want of a better term. Readers must look on the “Advertiser” as reading matter and treat it as such.

It contains much that is of ultimate scientific value. Advertisements are admittedly a source of revenue, but we wonder how many of the readers of the journal realize that, even if the journal were so heavily endowed that no revenue from advertisements was necessary, it would still be the duty of the journal to publish advertisements. If this journal does not exercise a careful control over the preparations offered for advertisement, if it does not indicate by its acceptance that certain substances are reliable and may be used with confidence by medical practitioners, there is no one else to do it. The "Advertiser" must therefore be read as carefully as what we have termed the reading matter. Some harassed practitioners are in the habit of getting rid of importunate drug travellers ("detailers", as they are termed in the drug trade) by saying that they never read advertisements. This is not fair to the journal. Though some men may speak the truth when they make such a statement, we do not believe it to be true of the majority of practitioners. In any case, the few who do not read the advertisements are the losers. We have stated that constructive criticism in regard to the reading matter will be welcomed; the same statement holds good as far as the "Advertiser" is concerned. The Editor and the Directors of this journal are anxious to make it as useful as possible to the members of the Branches.

Current Comment.

IMMUNIZATION AGAINST DIPHTHERIA BY ALUM-TOXOID.

J. C. SAUNDERS has recorded his experience of active immunization against diphtheria during an epidemic in Cork. Over 7,000 persons were treated, the antigen used being toxoid-antitoxin mixture (T.A.M.).¹ Of those immunized fifty developed diphtheria; in eleven the disease developed more than four months after immunization. Only two had been submitted to the Schick test and failed to react after immunization; in these the diagnosis was solely clinical. In view of such happenings an antigen was sought which would induce a higher degree of immunity than that produced by toxoid-antitoxin and induce it rapidly. The immunity should be produced even in "immunologically obstinate" persons and no unpleasant reactions should be evoked. Saunders turned to the work of A. T. Glenny, who experimented on animals, observ-

ing the antigenic effects of alum-toxoid, made by adding aluminium sulphate or potash alum to diphtheria toxoid. His results were most satisfactory and he concluded that increased antigenic response was due to delayed absorption and that when similar results followed Ramon's addition of tapioca to toxoid a like explanation held.

Saunders tried alum-toxoid (A.M.T.) for immunization on 436 children between the ages of eight months and fourteen years. Experience had shown that about 80% of unimmunized children were positive reactors, and, as it was hard to induce parents to submit their children to a long series of injections, the preliminary test was dispensed with in day schools and clinics. But in one group of children in institutions it was possible to carry out a preliminary test. Comparisons were made as follow: The percentage of non-reactors after immunization among children treated with alum-toxoid was compared with the percentage among those treated with toxoid-antitoxin and the rate of development of immunity in each group was noted. The number of reported cases of diphtheria in both groups after treatment were compared and the rate of development of immunity in controlled Schick-positive children in institutions was noted. In the toxoid-antitoxin group the tests were made six, nine and twelve months after treatment. With alum-toxoid the tests were carried out in so many weeks. The results strikingly justified expectations and served as an index of the relative merits of the two agents. Various tables are given showing the definite superiority of alum-toxoid.

Three patients immunized with alum-toxoid were subsequently notified as suffering from diphtheria. In one instance diphtheria ensued within three weeks of the last injection; in another, six months later; but neither patient had been submitted to the Schick test after treatment, and in each case the value of the alum-toxoid was found to be very low. The third patient developed diphtheria six weeks after a single injection had been given. For practical purposes no case of diphtheria was reported among children treated with alum-toxoid, regardless of whether such children were subsequently tested by the Schick test or not. The confirmed attack rate in the toxoid-antitoxin cases in 1930 was 2.35%, as compared with an attack rate of 25.69% in non-immunized children. If all notified cases be included, the attack rate was increased, but in many of these the diagnosis was not confirmed after admission of the patient to hospital. In the institutions in which the children were controlled, a preliminary Schick test was done and the positive reactors were divided into two groups. One was given alum-toxoid and the other toxoid-antitoxin. Six to seven weeks later both groups were retested. Of the 405 children 38.5% gave positive reactions, contrasting curiously with the 80% in the general school population. To insure even exposure to infection each group was divided into classes, which were again divided as evenly as possible. One portion was given alum-toxoid and the other toxoid-antitoxin. The second

¹ The Lancet, November 12, 1932.

dary Schick test was done six weeks after the last injection. Only 142 were submitted to the final test, as those who originally failed to react were eliminated and some children had left school. The results conform to those obtained by Glenny in guinea-pigs. After alum-toxoid the percentage of those who failed to react was 80.8 and after toxoid antitoxin 59.4.

A further analysis was made on the basis of the nature of the original Schick reaction. These were "slight", "moderate" or "marked". Probably many of the "slight" group should be regarded as not reacting. There was no material difference between the two subgroups in which the original reaction was "slight", just as would be expected if the majority of these were really non-reactors. In the "moderate" group patients treated with alum-toxoid gave 85% of non-reactors, as compared with 44.8% after toxoid-antitoxin. In the "marked" group 63.4% of non-reactors followed alum-toxoid and 25% followed toxoid antitoxin. Taking the two groups together, the percentage yielding no reaction was 76.9 after alum-toxoid and 42.4 after toxoid-antitoxin. These results constitute an index of the relative efficacy of the two antigens. In both groups the reactions with the preliminary tests were definitely positive. The work of W. H. Park and M. C. Schroder on children and guinea-pigs affords additional proof of the superiority of alum-toxoid over toxin-antitoxin or formol-toxoid.

Unfortunately Saunders makes no mention of the reactions following the use of alum-toxoid beyond stating that, when properly graduated doses are given, the reactions are not more severe than those caused by toxoid-antitoxin. But elsewhere in the same issue of *The Lancet* it is noted that these reactions are not always trivial and, while not alarming, present disadvantages as compared with older and better tried prophylactic reagents. Such untoward reactions have been obstinate indurations and cold abscesses. The populace certainly object to having unnecessary pain inflicted on themselves or their children. As to whether the superiority of alum-toxoid over other immunizing agents is conspicuous only further experience can determine. It is claimed that as alum-toxoid is slowly removed from its site of application, the patient is subjected to a continuous antigenic stimulus over a comparatively long period. This hardly conforms to the claim made by Saunders that immunity is rapidly induced.

MECHANICAL REPRODUCTION OF HEART SOUNDS.

THOUGH there are several useful methods, of which electrocardiography is the most important, for the graphical recording of the cardiac movements, until recently there has been none available for recording the actual heart sounds. But modern methods of recording and reproducing sounds have developed to such an extent that now even this is possible. Heart sounds and breath sounds are recorded by a "sound" camera and can be repro-

duced by means of apparatus similar to that employed in the reproduction of sound accompaniments in cinematography. Technical difficulties have prevented the methods from being widely used. A. Graham Asher has recently described a method of recording the heart sounds by means of an argon glow tube used in conjunction with an electrocardiograph.¹ From Asher's description it would appear a comparatively simple matter for any medical practitioner with a knowledge of the principles concerned to set up the apparatus. The sounds are recorded on photographic film as alternate light and dark bands. They can be interpreted by inspection or reproduced by means of a photo-electric cell; for general purposes inspection would be the method chosen. As a routine, Asher records the sounds to be heard at the apex (as determined by the point of maximum impulse), and the second right intercostal space and the third left intercostal space, close to the sternum. The sound records are made coincidentally with the records obtained separately with the first, second and third leads of the electrocardiograph.

Murmurs, as well as the heart sounds themselves, are, of course, recorded. In some cases it is possible to detect murmurs that are not observed, or perhaps are inaudible, at ordinary examination. Asher believes that much information may be gained from a study of the "sound film" record of heart sounds and murmurs (if any) in conjunction with synchronous electrocardiograms. He describes several illustrative cases.

This apparatus is another of the numerous mechanical devices that may be employed and developed in this mechanical age at the expense of clinical observation. It scarcely seems possible that it will supplant to any appreciable extent the ordinary methods of auscultation; but there are medical practitioners who, no doubt, will come to depend on it just as they depend on electrocardiography, radiography and a thousand and one other mechanical and chemical methods. Like many of these methods, it will be of value, providing it is wisely used and too great reliance is not placed on it. It may be of some service to large classes of students in the demonstration of heart sounds and abnormal accompaniments, and it may be of great value as a means of providing a record of progress in any particular case.

Even in these days, when the mechanical recording and reproduction of sounds have become commonplace, it is something to marvel at that records of heart sounds may be kept indefinitely on a piece of photographic film and the sounds themselves may be faithfully reproduced at the whim of a person operating a photo-electric cell. There are certain unpleasant possibilities. Descriptions of the mode of life, even the physiological processes, of notable people are shouted to the world at large; we hope the time does not come when loud speakers will thunder forth their heart sounds throughout the land.

¹ *Archives of Internal Medicine*, December, 1932.

Abstracts from Current Medical Literature.

SURGERY.

"Avertin" Treatment of Tetanus.

J. HERBRAND (*Münchener Medizinische Wochenschrift*, June 10, 1932) reports a case of tetanus treated by continuous "Avertin" anaesthesia in addition to the usual antitetanic treatment. His patient was a nine year old girl, and 43 grammes of "Avertin" were administered over a period of nine days. At first 0.1 gramme per kilogram body weight was given, and this was increased to three daily injections of 0.03 gramme. In addition, antitetanic serum was injected—35,000 units intramuscularly, 25,000 suboccipitally, and 5,000 by the intralumbar route. In the early stages the amount of "Avertin" was reduced and its effect prolonged by rectal instillations of magnesium sulphate. The patient soon became tolerant to the "Avertin", and the daily dose had to be increased. No ill-effects on the liver and kidneys were noted. The author's main impressions are the ease with which the spasms were controlled, the painless course of the disease, and the consequent assistance in nursing the patient.

The Surgical Anatomy of the So-Called Presacral Nerve.

L. ELAUT (*Surgery, Gynecology and Obstetrics*, November, 1932) describes the surgical anatomy of the so-called presacral nerve. Among the surgical procedures devised during the last decade for the cure of the pain which is the most prominent symptom in a series of diseases of the pelvis, the operation of Cotte has especially attracted the gynecologist's attention. This operation consists in resection of the postganglionic fibres of the sympathetic system, which provide the innervation of the important pelvic organs, the bladder, lower part of the ureter, uterus, anus (and, in the male, the prostate and the seminal vesicles). The nerve in question has been variously named—an indication of the great confusion regarding its physiology. The anatomy of the presacral nerve has been discussed only from the theoretical standpoint, as it is only lately that it has been included in the realm of surgery. The presacral nerve is never presacral, it is always prelumbar. It is situated in the triangular space formed by the common iliac arteries and the line of the promontory. It is quite exceptional to find a true nerve. In a very high percentage of cases, what should be the nerve is merely a plexus. Whatever its construction, it resembles an elongated triangular ribbon which is a dense connected mass with interwoven nerve fasciculi. The nerve varies in length. It begins approximately at the point where the abdominal aorta divides into the common iliac arteries and very soon

splits into two branches, the hypogastric nerves. These branches descend behind the peritoneum toward the side walls of the pelvis. In one-third of the cases the nerve occupies the left half of the interiliac trigone. It always runs over the left common vein. At the level of the promontory the two hypogastric nerves are always distinct entities. Sometimes the right hypogastric nerve may cross the concave surface of the sacrum; however, the nerve itself never does. Neither the presacral nerve nor its two branches are adherent to the peritoneum, which may always be lifted up without the production of any traction on the nerves. The right ureter, however, is adherent to the peritoneum, a fact which must be kept in mind in surgical procedures. In about 8% of cases the pelvic mesocolon is inserted exactly in front of the interiliac trigone, so that the nerve cannot be reached by a simple incision of the peritoneum. In such circumstances the chief branches of the inferior mesenteric artery must be moved to the left so as to expose the triangular space between the two common iliac arteries. The following procedure is suggested as an easy and reliable method for the complete exposure of the nerve. Through a vertical incision of the peritoneum exactly at the level of and below the aortic bifurcation a search is made of the nerve elements at the aortic bifurcation, their frequent lateral position being kept in mind. Then the whole nerve formation is grasped with an appropriate instrument and traction is exerted so as to raise the branched network of the nerve mass. If these steps are carried out, there is obviously less danger of injury to the important vessels of the region and an increased guarantee of being able to perform a complete neurotomy, since no important branches will be overlooked.

Basal Metabolic Rate Estimations.

WILLIAM J. DEADWAN AND A. M. GRAHAM (*The Western Journal of Surgery, Obstetrics and Gynecology*, October, 1932) report 6,820 basal metabolic rate estimations made since 1920. The authors have attempted to correlate basal metabolic rate findings in cases of thyroid disease with the histological changes found in the glands removed at operation. Four hundred and seventeen such comparisons were made. Three-fourths of such cases fall into two groups, those of the hyperplastic or exophthalmic type and those comprising the colloid or toxic adenoma group. In the former group the rate is almost constantly above 20% and mostly above 50%. Only two persons of a total of 87 in this group had a normal basal metabolic rate. In the toxic adenoma group the rate is generally lower; in the great majority it is below 50%. A familial incidence was noted in the occurrence of exophthalmic goitre. Having performed many basal metabolic rate determinations both before and after application

of X rays to the thyroid glands of patients, the authors conclude that the rays may have an influence on body metabolism apart from the specific influence exerted on the thyroid gland. Some patients with chronic thyroiditis and two with malignant disease had a high basal metabolic rate. A cretin infant was examined and has returned at intervals for seven years, during which time treatment has been followed. The rate has varied from -8% to -32%, according to the dosage of thyroid gland. Another cretin showed great clinical improvement although the basal metabolic rate varied from -33% to -14%. A basal metabolic rate estimation should be done before thyroid treatment is commenced in obesity. Here the rate may be normal or subnormal, while a few obese patients are already suffering from hyperthyroidism. Estimations are often requested in the early months of pregnancy, when a swelling of the neck is noted.

The Surgical Treatment of Raynaud's Disease.

R. LERICHE AND R. FONTAINE (*La Presse Médicale*, February 11, 1933) discuss the surgical treatment of Raynaud's disease. They state that it is nearly thirty years since one of them suggested that Raynaud's disease might be treated by section of sympathetic nerves. It is fifteen years since the first patient was operated on by Veillet and Thibaudet. They discuss their own experiences and divide their cases into three groups: (i) those in which periarterial sympathectomy has been used, (ii) those in which ramisection has been combined with periarterial sympathectomy, (iii) those in which removal of a ganglion has been combined with other procedures. They point out that their results with ramisection are inferior to their results with periarterial sympathectomy. They conclude that it is possible to banish all manifestations of Raynaud's disease for a considerable time (in their experience up to seven or eight years). Some of the results are the equivalent of cures; no pain occurs, there are no further crises, and after a period of years no trophic disturbance is noted. It is probably impossible to do away with the vaso-constrictive innervation of a limb, and this is not necessary in order to obtain a lasting cure in Raynaud's disease. The authors conclude that Raynaud's disease is essentially a surgical disease and that the subject still requires study—much careful investigation must be carried out before this therapeutic problem may be regarded as solved.

Treatment of Pain in Inoperable Carcinoma.

F. SCHUCK (*Deutsche Medizinische Wochenschrift*, January 6, 1933) writes that operative treatment plus deep X ray therapy has often prolonged life. Unless freedom from pain ensues, life is a misery and results

in excess of narcotic drugs being taken and a rapid progress down hill. Operations for the relief of pain are indicated whereby the patient can live fairly comfortably for months or years free from pain. The simplest and most peripheral of all operations is best. Peripheral nerves cannot always be divided, for example, the sciatic and its branches, because they are mixed nerves, and on division anaesthesia and motor paralysis and trophic disturbances occur. Such nerves as the occipital and the ilio-inguinal plus the ilio-hypogastric have been divided in tumours of the back of the head and the lower abdomen respectively. In addition to pains arising from the cerebro-spinal nerves, there is a vessel pain arising in the autonomic nervous system; this pain is relieved by division of the nerves running in the vessel wall. The neuralgia of nerve stumps disappears when the vessels are freed from the scars and its adventitia with its nerves excised. Division of the posterior nerve roots has not proved successful, since the pains nearly always recur, because a large number of the spontaneous pain stimuli do not run in the posterior nerve roots. The operation of chordotomy (von Spiller and Martin, 1911) namely, division of the anterior spinothalamic tract, is an operation free from any risk apart from the risk of sepsis. This procedure is very useful for unbearable pain, and in the author's last series of twelve cases he had no operative or post-operative mortality. With correct technique no motor or bladder disturbances occur, and all pains disappear and do not recur. This operation is very useful for unbearable pains situated below the umbilicus, especially in gynaecological carcinomata, rectal and prostatic neoplasms. In five operations done for gynaecological carcinomata there was a marked relief from pain, and in some cases total relief. This operation requires special training and should be used only when all other means of relieving the pain have failed.

Gall-Stone Disease and Gastro-Duodenal Ulcer.

R. EHRMANN (*Deutsche Medizinische Wochenschrift*, March 22, 1933) has, during the past fifteen years, investigated gall-stone disease and gastro-duodenal ulcer. He noted that the incidence of cholelithiasis was increased at the end of the war and during the inflation period, 1922-1923. He attributes this to the heavy indigestible fat consumed in large quantities. In cases of cholelithiasis there is nearly always an hereditary disposition, especially in young patients. Carcinoma of the gall-bladder and acute pancreatitis nearly always occur in patients with cholelithiasis. Seven thousand patients were seen with ulcer, 800 of whom were examined at autopsy. The author attributes the large numbers to a faulty, voluminous, coarse diet with too little fat. Following post mortem evidence he found that ulcers

occurred more frequently without symptoms and healed more easily than was supposed. A certain percentage of the ulcers become chronic and this is usually associated with hypertrophic gastritis, which disappears when the ulcer heals. Carcinoma supervening on ulcer is very rare.

Cholepathia Spastica.

V. SCHMIEDEN and H. NIESSEN (*Münchener Medizinische Wochenschrift*, February 17, 1933) describe as pseudo-cholelithiasis the condition of those patients who have severe intermittent attacks of pain without fever or jaundice, when the pain is characteristic of cholelithiasis and when at operation minimal or no changes are found in the gall-bladder. Occasionally at operation they found a distended gall-bladder and in the absence of other lesions, they believed the distension to be the cause of the pain. Distension is considered to be caused by difficulty of the gall-bladder in emptying itself, possibly due to defective thickening of the bile due to poor resorption. Zander found that only 42% of patients of this kind were cured by cholecystectomy. Westphal found in these cases a well developed musculature in the region of the papilla of Vater. In addition, the sphincter of Oddi may be hypertrophied and opens only with suitable stimuli from the intestine. The innervation of this sphincter is from the vagus, sympathetic and parasympathetic. In dyskinesia of the gall-bladder, disturbances between the function of the gall-bladder and extra-hepatic ducts on the one hand and the sphincter of Oddi on the other hand may occur, due to disturbances of innervation. The main site of disturbance is at the sphincter of Oddi, spasm occurring and consequently overfilling of the gall-bladder with peristalsis and a typical picture of gall-stone colic. All modern clinical technique must be used in differentiating between cholecystitis and cholelithiasis and pseudo-cholelithiasis. Treatment should be medical and early if possible, to prevent secondary changes occurring (stones and inflammation). If the diagnosis is in doubt or if medical treatment fails, an exploratory laparotomy is indicated, and such measures as stretching the sphincter of Oddi by bougies, or a gall-bladder anastomosis with the stomach or small intestine must be considered.

Faecal Concretions in the Appendix.

LUDWIG ASCHOFF (*Münchener Medizinische Wochenschrift*, January 20, 1933) states that the majority of concretions in the appendix arise after an acute attack of appendicitis. True faecal stones take days, probably weeks, to develop fully after retention of faecal material in the appendix. The question arises: Is faecal accumulation a normal physiological process in the appendix? The appendix does not normally have the same peristaltic movements as the small and large

intestines, and the failure to empty depends on its anatomical structure and position. True faecal stones chiefly consist of a faecal nucleus on which repeated layers of mucus have been deposited. This mucus arises almost always from an appendiceal inflammation. It is difficult to be certain whether the faecal concretion which forms the nucleus is present before or after the inflammation occurs. The bacterial inhabitants of the central part of the stone gradually decrease, whereas after each deposition of mucus more and more bacteria are developed peripherally. The bacteria commonly found are Gram-positive diplococci, Gram-positive bacilli and Gram-negative colon bacilli. These stones do not only act purely mechanically, but also as a medium for the growth of the organisms which, after reaching a certain virulence, may cause appendicitis.

Pulsion Diverticula of the Oesophagus.

FRANK H. LAHEY (*Surgery, Gynecology and Obstetrics*, February, 1933) discusses the surgical management of very small and early pulsion oesophageal diverticula. In the experience of performing the two-stage excision of pulsion diverticula of the oesophagus in some 35 patients with no deaths, he has been impressed with the fact that the intermediate sized type is the easiest to manage surgically. The diverticulum with a sac large enough to be readily mobilized and implanted in the wound with the dome well above the level of the skin is the simplest type to operate upon. Very large oesophageal diverticula are often difficult to handle surgically, particularly since patients with them are often "bad risks", because they have not received sufficient amounts of food on account of the long-standing obstruction; in addition, the aperture made by the opening of the diverticulum at its neck is often so large that dissection, particularly on the right side, may be somewhat troublesome. There is no real difficulty in treating large and intermediate sized diverticula by the two-stage operation. It is desirable that patients be compelled to put up with the symptoms of pulsion oesophageal diverticulum until it has reached such a size that it can be implanted well above the level of the skin. Pulsion oesophageal diverticula do not disappear, but tend to increase in size and to produce more and more marked symptoms. It is desirable to remove pulsion oesophageal diverticula, no matter how small they are, provided that they have produced a sac with a distinct neck. The sac may be implanted in the wound and safely removed by the two-stage procedure without the danger of leakage and mediastinitis. It is desirable, regardless of whether removal is by the one-stage or two-stage procedure, that patients have a bougie inserted after operation every two to three months for a year, and that the bougie be passed upon a string guide.

British Medical Association News.

ANNUAL MEETING.

THE ANNUAL MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Robert H. Todd Assembly Hall, British Medical Association House, 135, Macquarie Street, Sydney, on March 30, 1933, Dr. A. J. Gibson, the President, in the chair.

ANNUAL REPORT OF COUNCIL.

On the motion of the Honorary Secretary the annual report of the Council was received. The report is as follows.

The Council presents the following report on the work of the Branch for the year ended March 30, 1933.

Membership.

The membership of the Branch is now 1,583, as against 1,624 at the date of the last report. The Branch has lost, during the year, 8 by resignation, 25 by removal out of the Branch, 45 by default in payment of subscription, and 21 by death. The losses by death were as follows: Dr. Richard Arthur, Dr. C. R. Smith, Dr. J. B. Keiran, Dr. F. R. E. Duke, Dr. T. P. McKell, Dr. L. J. Lamrock, Dr. G. R. Hamilton, Dr. C. A. Muller, Dr. J. M. Maclean, Dr. W. B. H. Wood, Dr. F. C. S. Shaw, Dr. F. M. Suckling, Dr. F. W. West, Dr. F. J. Burns, Sir Charles Clubbe, Dr. P. Blackall, Dr. T. Storie Dixson, Dr. W. H. Weston, Dr. W. B. Studdy, Dr. T. D. Bertram, Dr. J. F. Cramp.

Meetings.

Ten ordinary meetings of the Branch (including the Annual General Meeting) and eight clinical meetings were held. The average attendance was 54. Seven of the ordinary meetings, as follows, were held in conjunction with meetings of sections, namely: April 28, with the Section of Medicine, the Section of Surgery, the Section of Pathology and Bacteriology, and the Section of Radiology; May 26, with the Section of Oto-Rhino-Laryngology, the Section of Pediatrics and the Section of Hygiene and Preventive Medicine; June 30, with the Section of Medicine, the Section of Surgery and the Section of Neurology and Psychiatry; July 28, with the Section of Radiology and the Section of Surgery; August 25, with the Section of Orthopaedics and the Section of Surgery; September 29, with the Section of Obstetrics and Gynaecology; October 27, with the Section of Medicine (also in conjunction with a meeting of the Australian Dental Association, N.S.W. Branch); November 24, with the Section of Pediatrics and the Section of Pathology and Bacteriology. The clinical meetings were held at the Lewisham Hospital, the Royal Prince Alfred Hospital, the Royal North Shore Hospital of Sydney, Sydney Hospital, the Royal Alexandra Hospital for Children, Saint Vincent's Hospital, the Women's Hospital and the Renwick Hospital for Infants. The business of the meetings during the year included seventeen papers and addresses, numerous reports of cases, exhibits, demonstrations, and the showing of cinema films. In accordance with the usual practice, the Sydney University graduates and graduands (1932) in medicine were invited to attend the ordinary meeting of December 8.

Representatives.

The Branch was represented as follows:

- (a) *Council of the British Medical Association* (1932-1933): Professor R. J. A. Berry.
- (b) *Representative Body* (1932-1933): Dr. H. M. Moran.
- (c) *Federal Committee* (1933): Dr. J. A. Dick, C.M.G., Dr. C. H. E. Lawes.
- (d) *Australasian Medical Publishing Company, Limited*: Dr. George Armstrong, Dr. T. W. Lipscomb, Dr. F. P. Sandes.

- (e) *Council of the Bush Nursing Association* (1932-33): Dr. A. J. Gibson.
- (f) *Council of the Royal Society for the Welfare of Mothers and Babies*: Dr. R. B. Wade and Dr. A. J. Gibson.
- (g) *Board of Control of the Campaign Against Tuberculosis*: Dr. S. A. Smith.
- (h) *Executive Committee of the Council for Mental Hygiene for New South Wales*: Dr. C. K. Parkinson and Dr. E. H. M. Stephen.
- (i) *Australian Committee, Third International Paediatric Congress* (1933): Dr. R. B. Wade and Dr. E. H. M. Stephen.

Council.

(a) The attendance of the members of the Council and of the standing committees was as set out in the accompanying table.

(b) The representatives of the Local Associations of Members, appointed on the invitation of the Council to attend the regular quarterly meetings of the Council were as follows: Dr. Kevin Byrne (Canterbury-Bankstown), Dr. A. M. Gladden (City), Dr. J. M. Alcorn (Central Southern), Dr. E. H. Friedman (Central Western), Dr. W. T. J. Harris (Eastern Suburbs), Dr. A. C. Thomas (Illawarra Suburbs), Dr. L. Cowlishaw (Kuring-gai District), Dr. A. G. Brydon (Northern District), Dr. Ossian Robertson (Warringah District), Dr. Brooke Moore (Western), Dr. W. M. A. Fletcher (Western Suburbs).

Library.

Dr. J. A. Dick again held the position of Honorary Librarian. Donations of books, periodicals and photographs were received from the Australasian Medical Publishing Company Limited, Mrs. R. H. Todd, Dr. R. J. Silverton, Dr. F. Brown Craig, Dr. Frank Tidswell, Dr. R. B. Wade, Dr. F. G. N. Stephens, the late Sir Charles Clubbe, Dr. S. S. Rosebery, Dr. Garnet Halloran, Dr. A. M. Davidson, Dr. C. Nigel Smith and the Inspector-General of Mental Hospitals.

Affiliated Local Associations of Members.

Balmain District (affiliated 1913): *Chairman*, Dr. H. K. Porter; *Honorary Secretary*, Dr. F. R. Coyne. Membership, 16.

Border (affiliated 1908): *Honorary Secretary*, Dr. R. Affleck Robertson. Membership, 12.

Canterbury-Bankstown (formed 1930): *Chairman*, Dr. T. E. Parker; *Honorary Secretary*, Dr. G. J. Cousins. Membership, 26. Eight meetings were held.

Central Northern (affiliated 1910): *Chairman*, Dr. A. T. Roberts; *Honorary Secretary*, Dr. F. W. D. Collier. Membership, 63. Ten meetings were held.

Central Southern (affiliated 1909): *Honorary Secretary*, Dr. S. P. Lyttle. Membership, 30.

Central Western (affiliated 1910): *Chairman*, Dr. A. R. Hunt; *Honorary Secretary*, Dr. K. S. Macarthur Brown. Membership, 47. Two meetings were held.

City (affiliated 1913): *Chairman*, Dr. H. A. Ridler; *Honorary Secretary*, Dr. L. R. Flynn. Membership, 21. One meeting was held.

Eastern District (affiliated 1913).

Eastern Suburbs (affiliated 1911): *Chairman*, Dr. W. T. J. Harris; *Honorary Secretary*, Dr. Hugh Hunter. Membership, 81. Four meetings were held.

Illawarra Suburbs (affiliated 1913): *Chairman*, Dr. E. H. Stokes; *Honorary Secretary*, Dr. G. F. L. Elliott. Membership, 37. Five meetings were held.

Kuring-gai District (formed 1929): *Chairman*, Dr. W. L. Kirkwood; *Honorary Secretary*, Dr. F. A. E. Lawes. Membership, 44. Four meetings were held.

North-Eastern (affiliated 1913): *Chairman*, Dr. A. J. Ople; *Honorary Secretary*, Dr. J. R. Ryan. Membership, 38. Three meetings were held.

Northern District (affiliated 1911): *Honorary Secretary*, Dr. R. J. Jackson. Membership, 55.

South-Eastern (formed 1914): *Chairman*, Dr. John Kerr; *Honorary Secretary*, Dr. L. Fetherston. Membership, 13. Five meetings were held.

South Sydney (affiliated 1909): *Chairman*, Dr. N. M. A. Alexander; *Honorary Secretary*, Dr. P. J. Markell. Membership, 25. Four meetings were held.

Southern District (affiliated 1909): *Chairman*, Dr. S. H. Weedon; *Honorary Secretary*, Dr. C. R. Sim. Membership, 68. One meeting was held.

Warringah District (formed 1929): *Chairman*, Dr. E. A. Tivey; *Honorary Secretary*, Dr. E. L. Newman. Membership, 75. Two meetings were held.

Western (affiliated 1908): *Chairman*, Dr. J. M. Maclean; *Honorary Secretary*, Dr. S. R. Dawes. Membership, 76. Five meetings were held.

Western Suburbs (affiliated 1908): *Chairman*, Dr. A. L. Lance; *Honorary Secretary*, Dr. C. E. Vickery. Membership, 105. Three meetings were held.

Annual Meeting of Delegates.

The twentieth annual meeting of delegates of the affiliated Local Associations of Members with the Council was held on October 7, 1932. An account of the meeting appeared in THE MEDICAL JOURNAL OF AUSTRALIA of November 5, 1932.

Sections for the Study of Special Branches of Medical Knowledge.

Genito-Urinary and Venereal Diseases (inaugurated 1928).

Hygiene and Preventive Medicine (inaugurated 1922): *Honorary Secretary*, Dr. A. H. Baldwin. Two meetings were held, including one in conjunction with a meeting of the Branch.

Medical Literature and History (inaugurated 1925): *Chairman*, Professor Harvey Sutton; *Honorary Secretaries*, Dr. H. M. Moran and Dr. L. Cowlshaw. Three meetings were held.

Medicine (inaugurated 1924): *Chairman*, Dr. S. A. Smith; *Honorary Secretary*, Dr. E. H. Stokes. Membership, 31. Five meetings were held, including three in conjunction with meetings of the Branch.

Neurology and Psychiatry (inaugurated 1924): *Chairman*, Dr. S. Evan Jones; *Honorary Medical Secretary*, Dr. H. M. North; *Honorary Secretary*, Dr. J. A. L. Wallace. Membership, 48. Six meetings were held, including one in conjunction with a meeting of the Branch.

Obstetrics and Gynaecology (inaugurated 1925): *Chairman*, Dr. H. H. Schlink; *Honorary Secretary*, Dr. H. A. Ridler. Membership, 50. Four meetings were held, including one in conjunction with a meeting of the Branch.

Orthopaedics (inaugurated 1923): *Chairman*, Dr. P. L. Hipsley; *Honorary Secretary*, Dr. F. H. McC. Callow. Membership, 24. Five meetings were held, including one in conjunction with a meeting of the Branch.

Oto-Rhino-Laryngology (inaugurated 1924): *Chairman*, Dr. J. J. Woodburn; *Honorary Secretary*, Dr. Ashleigh Davy. Membership, 30. Five meetings were held, including one in conjunction with a meeting of the Branch.

Pædiatrics (inaugurated 1921): *Chairman*, Dr. M. J. Plomley; *Honorary Secretaries*, Dr. F. C. Rogers and Dr. L. H. Hughes. Membership, 54. Seven meetings were held, including two in conjunction with meetings of the Branch.

Pathology and Bacteriology (inaugurated 1924): *Chairman*, Dr. Oliver Latham; *Honorary Secretary*, Dr. Phyllis Anderson. Membership, 33. Five meetings were held, including two in conjunction with meetings of the Branch.

Radiology (inaugurated 1926): *Chairman*, Dr. W. A. Edwards; *Honorary Secretary*, Dr. A. F. Oxenham. Membership, 28. Five meetings were held, including two in conjunction with meetings of the Branch.

Study of Cancer (inaugurated 1928).

Surgery (inaugurated 1925): *Chairman*, Dr. Colvin Storey; *Honorary Secretary*, Dr. C. E. Winston. Membership, 40. Five meetings were held, including four in conjunction with meetings of the Branch.

ATTENDANCES AT COUNCIL AND STANDING COMMITTEE MEETINGS.

	Council.	Committees.				
		Executive and Finance.	Organization and Science.	Medical Politics.	Hospitals.	Ethics.
Dr. J. E. V. BARLING (Hon. Treasurer and Premises Attorney)	8	12	—	—	—	—
Dr. G. M. BARRON	11	—	—	—	—	7
Dr. GEORGE BELL (Past President)	9	11	—	—	—	—
Dr. C. B. BLACKBURN	4	—	—	—	—	7
Dr. A. J. COLLINS	10	—	9	—	3	—
Dr. A. M. DAVIDSON	10	10	—	13	—	—
Dr. LINDSAY DEY	9	—	—	10	—	—
Dr. J. A. DICK (Hon. Librarian) ¹	9	7	—	8	—	—
Dr. B. T. EDYE	10	—	—	—	—	7
Dr. A. J. GIBSON (President)	11	12	10	13	3	7
Dr. R. V. GRAHAM	11	—	—	8	4	—
Dr. A. W. HOLMES & COURT (President Elect)	10	9	10	10	2	7
Dr. HUGH HUNTER	11	—	11	12	—	—
Dr. W. K. INGLIS	11	—	9	—	—	—
Dr. C. H. E. LAWES (Hon. Secretary)	10	9	3	9	1	1
Dr. A. A. PALMER	9	—	—	—	—	7
Dr. W. F. SIMMONS	11	—	—	13	4	—
Dr. KENNETH SMITH	11	11	—	8	—	—
Dr. E. H. M. STEPHEN	5	—	7	—	—	7
Dr. R. B. WADE	8	12	—	—	4	—
Meetings held	11	13	11	13	4	8

¹ Absent during four months on account of illness.

British Medical Association Lectures.

Lectures were arranged as follow:

Central Southern Medical Association, Goulburn, April 15, 1932, Dr. R. S. Steel: "Allergy, with Special Reference to Asthma and Hay Fever".

North Eastern Medical Association, Lismore, April 9, 1932, Dr. F. A. Maguire: "Medical Gynaecology".

Western Medical Association, Cowra, May 28, 1932: Dr. N. M. Gibson: "Gonococcal Infection of the Prostatic Urethra and its Sequelae".

Northern District Medical Association, Armidale, September 21, 1932, Dr. E. H. M. Stephen: "Some Troublesome Disorders of Childhood".

Post-Graduate Study.

From May 30 to June 4, 1932, a refresher course for general practitioners was held at the metropolitan hospitals, 39 practitioners attending.

Permanent Post-Graduate Committee.

On September 22, 1932, the New South Wales Permanent Post-Graduate Committee was inaugurated. This committee was founded by the Council to replace its own Standing Committee, which has been responsible for post-graduate work in past years. The new committee is made up of representatives from the eight larger metropolitan hospitals and the Faculty of Medicine, two representatives appointed by the Council and three co-opted members. The personnel of the committee is as follows: Dr. T. W. Lipscomb (Chairman), representing Lewisham Hospital; Dr. L. W. Dunlop (Vice-Chairman), representing British Medical Association; Dr. V. M. Coppleson (Honorary Secretary), representing Saint Vincent's Hospital; Dr. W. Vickers (Honorary Assistant Secretary), representing Royal Alexandra Hospital for Children; Dr. E. H. Stokes (Honorary Treasurer), representing Sydney Hospital; Dr. W. Keith Inglis, representing the British Medical Association; Professor Whitridge Davies, representing the Faculty of Medicine; Dr. T. Dixon Hughes, representing Women's Hospital, Crown Street; Dr. T. Farranridge, representing Royal Hospital for Women; Dr. H. Z. Throsby, representing Royal North Shore Hospital; Dr. Allan Walker, representing Royal Prince Alfred Hospital; Professor Harold Dew, Dr. A. J. Gibson and Dr. H. O. Lethbridge, co-opted members.

During November and December, 1932, a series of lecture demonstrations were held, the subjects being as follow: "Sodium Amytal", "Avertin", "Spinal Anæsthesia", "Fundus Oculi", "Renal Function Tests".

The 1933 annual refresher course will be held in Sydney from May 29 to June 9.

The Committee is grateful for much valuable assistance and for suggestions from the Melbourne Permanent Post-Graduate Committee, and believes that the cooperation between the two bodies will result in a central organization for post-graduate work in Australia.

Broadcast Talks.

By arrangement with the Australian Broadcasting Commission, radio broadcast talks on medical subjects of general interest to the public will be given at fortnightly intervals commencing at an early date.

Australasian Pharmaceutical Formulary.

As a result of a conference between representatives of the Pharmaceutical Association of Australia and New Zealand and a special committee appointed by the Council in regard to extending the scope of the Australasian Pharmaceutical Formulary, it was decided to recommend to the Federal Committee that a committee be appointed to co-operate with the Pharmaceutical Association of Australia and New Zealand in producing a new edition of the Australasian Pharmaceutical Formulary, and that a formulary suitable for use in contract practice and public hospitals be compiled as a supplement or addendum to the Australasian Pharmaceutical Formulary.

Contract Practice—Friendly Society Lodges.

At the request of the Friendly Societies' Association, the executive officers of that body, together with the grand secretaries of the affiliated friendly societies, met the Medical Politics Committee on September 5, 1932, to discuss the following proposals relating to the Common Form of Agreement between Medical Officer and Friendly Society Lodge, namely: (1) Extension of the metropolitan area to include Liverpool, Blacktown, Sutherland and Cronulla. (2) City rates for City of Newcastle and suburbs and for municipalities outside the district of Sydney and suburbs, and of Newcastle and suburbs with a population of 7,500 and over. (3) Reduction of rates by 22½%. (4) Elimination of the word "minimum" as applying to rates. (5) Allowance of fourteen days grace for the supplying of medical lists. (6) Adoption of a common form of medical examination, such form to be drawn on the experience of insurance companies. The proposals were later referred to the Local Associations of Members for discussion at the Annual Meeting of Delegates. After hearing the views of the delegates of the Local Associations, the Friendly Societies' Association was advised: (a) That, in regard to proposals (1), (2), (3) and (4), the Council was unable to approve of any alteration to the Common Form of Agreement. (b) That the Council would agree to fourteen days grace being allowed for the supplying of medical lists. (c) That the Council would approve of a common form of medical examination of candidates being adopted, provided that: (i) the fee for the examination is commensurate with services rendered; (ii) the lodge is responsible for the collection of the fee; (iii) the form contains a statement in regard to income limit.

In February, 1933, in reply to a request that the Council reconsider its decision in regard to proposals (1), (2), (3) and (4), the Friendly Societies' Association was advised that, as the existing rates are very low, and having regard to the services rendered, and also that conditions of practice in country districts are so different from those in the metropolitan area, the Council could see no reason why its previous decision on these matters should be altered.

Medical Treatment of Unemployed in Mining Districts.

The position of medical practitioners in mining districts, who are providing free medical attendance to large numbers of unemployed, has been brought under the notice of the Premier, the Hon. B. S. B. Stevens, M.L.A. It is hoped that some arrangement will be made whereby those practitioners who are treating free of charge a very considerable number of unemployed, will receive some remuneration for their services.

Workers' Compensation Act, 1926-29.

At their request, representatives of the Associated Licensed Insurers met the Medical Politics Committee to discuss the review of the terms of Schedule "D". The Licensed Insurers contended that as there had been a general reduction in costs and charges, the charges prevailing five years ago should not now be in force, and that there should therefore be a review of the terms of Schedule "D". The Associated Licensed Insurers were subsequently advised that, as the charges agreed upon in October, 1927, represent a considerable reduction on the present customary charges, the Council would not agree to any reduction in the schedule rates.

Hospital Policy.

The Council has devoted a good deal of attention to the hospital problem during the last year, and has developed a policy which is now being submitted to the Local Associations of Members and the staffs of hospitals for consideration. A general meeting of the Association will be held at an early date to consider this important matter.

Premises.

The income and expenditure account for the year ended December 31, 1932, shows an excess of expenditure over

revenue of £1,020 7s. 4d. as against a deficiency of £1,741 16s. 11d. for the year ended December 31, 1931—an improvement of £721 9s. 7d.

Although the average number of tenants in the building was greater during the year 1932 than in the year 1931, the total amount of rent earned during 1932, by reason of the *Rent Reduction Act*, was £82 15s. less than in 1931, while donations in response to an appeal amounted to £559 17s. in 1931 as against only £56 3s. 2d. in 1932, thus showing a reduction in the total revenue of £585 8s. 10d. On the other hand, mainly by reason of the benefits received under the *Interest Reduction Act*, the total expenditure of the Premises Account was reduced by £1,307 18s. 5d., thus reducing the net deficit for the year by £721 9s. 7d.

A comparison of the percentage of annual revenue of the building from June, 1930, to December 31, 1932, to the annual expenditure is as follows:

	Half Year,			
	1930.	1931.		
Rent revenue	80-6%	80-4%	..	89-7%
Donations	—	4-8%	..	0-5%
	80-6%	85-2%	..	90-2%
Deficiency	19-4%	14-8%	..	9-8%
Expenditure	100-0%	100-0%	..	100-0%

thus showing a continuous reduction in the amount of the deficiency during each of the accounting periods since the building opened.

Although the building accounts show a net deficiency of £1,020 7s. 4d. for the year ended December 31, 1932, the accumulated funds of the Premises Account were reduced during that period by only £53 4s. by reason of a surplus of £962 18s. 4d. in respect of the purchase of the late Dr. Gordon Craig's debentures and the receipt of £4 5s. interest on Australasian Medical Publishing Company, Limited, debentures.

British Medical Agency of New South Wales, Limited.

The year under review may be regarded as the first complete year, since the establishment of the Agency was in June, 1931. It is felt, therefore, that this report should be of great interest to all members.

The Agency is the property of the Branch. Its profits will be paid to the Branch, as provided in the constitution. The Directors, who are well-known members of the profession, have devoted a considerable amount of time and effort to laying a firm and true foundation of the Agency. The Secretary is responsible to the Directors, to whom appeal may be made by any client who considers he has cause for complaint.

The revenue of the Agency is derived from various sources. The following figures for the year 1932 are of interest:

	£	s.	d.
1. Supplying of locums, assistants <i>et cetera</i> ..	145	0	0
2. Sales of practices, partnerships <i>et cetera</i> ..	451	0	0
3. Life assurance—new business ..	248	0	0
4. Life assurance—renewals ..	225	0	0
5. Fire and accident insurances ..	165	0	0
6. Book-keeping and accounts service ..	24	0	0
7. Miscellaneous services ..	58	0	0
Total ..	£1,316	0	0

Such results, obtained in 1932, after the preliminary six months of organizing, are surely very definite proof of the need which existed previously for a medical agency conducted along business-like lines by a body responsible to the members themselves.

In connexion with amounts received from:

1. The Supplying of Locums, Assistants *et cetera*: The records of all men recommended for locum work are investigated and endeavours made to arrange for the right type of man to act as locum in each instance. The reports

received from practitioners who have availed themselves of the Agency's services are very satisfactory.

2. Sales of Practices *et cetera*: The income received from this source should be by far the greatest of any, as it represents the bulk of medical agency work. The transfers arranged, from which the above amounts were received, have proved satisfactory, and it is believed that the ever-increasing measure of support afforded by practitioners throughout the State will enable the Agency to show a big increase in income from this source during the ensuing twelve months.

3. Life Assurance—New Business: The Agency has been appointed as sub-agents of the Australian Mutual Provident Society in connexion with new life and endowment assurance, and is responsible for the inauguration, in July last, of the British Medical Association (New South Wales Branch) Superannuation Fund. The fact that so far over one hundred applications have been received for membership would indicate that this fund fills a long-felt want in the medical profession, and those who have not applied for membership would be well advised to make full inquiries. Three separate claims for the sickness benefits included under this fund have been received and paid to the satisfaction of members concerned. It is hoped that the efforts to provide for members security for their dependants and freedom from worry in old age will be appreciated by every practitioner in the State.

4. Life Assurance—Renewals: The Agency is collecting agent for the Australian Mutual Provident Society, and is empowered to collect all premiums on existing policies with the Society. The Agency thus collects premiums on about seven hundred and fifty different policies of members, and the renewal commission shown under this heading above represents 2½% on the amount of premiums received. It is important for members to note that under the monthly premium plan it is possible to pay the yearly premium by instalments without any loading of interest. Official receipts of the Society are issued for all payments, and strict privacy is maintained in all matters connected with the individual. Any special relationship which may exist between the member and the Society is in no way disturbed by the arrangement.

5. Fire and Accident Insurances: The Secretary is Attorney for New South Wales of the Samarang Sea and Fire Insurance Company, Limited, which is owned and guaranteed by the Sun Insurance Office, Limited. Policies available include fire insurance on house, furniture, instruments *et cetera*, motor car comprehensive, workers' compensation *et cetera*. Members are assured of the fullest possible protection and the prompt settlement of claims.

6. Book-keeping and Accounts Service: Special arrangements have been made with Messrs. Shannon and Dickins, Public Accountants and Auditors, of Sydney, who undertake all work entailed in connexion with this service, which includes the furnishing of taxation returns, keeping of private books, patients' accounts *et cetera*, but does not embrace the collection of bad debts. It is felt that there are many members to whom this service would be of value.

7. Miscellaneous Services: These include the preparation and dispatch of circulars concerning the meetings of Local Associations, and other matters not included in any of the above sections.

This report would be incomplete without some reference to the advice which is freely given to any inquirer on all matters of procedure and principle, and it is as well to know that no obligation of any kind is attached to advice of this nature. In conclusion, the support afforded by many members in all departments of business is thankfully acknowledged.

Federal Committee.

The Federal Committee of the British Medical Association in Australia met in Sydney on September 1, 1932, and in Melbourne on March 6, 1933. Reports of the proceedings of the Committee were published in *THE MEDICAL JOURNAL OF AUSTRALIA* of September 17, 1932, and March 25, 1933.

BRITISH MEDICAL ASSOCIATION—NEW SOUTH WALES BRANCH.

Balance Sheet as at December 31, 1932.

LIABILITIES.		ASSETS.	
£	s. d.	£	s. d.
Sundry Creditors—		Commercial Banking Company of	
THE MEDICAL JOURNAL OF AUSTRALIA	745 18 9	Sydney, Limited	294 1 11
Sundries	28 2 10	Cash on Hand	4 4 6
Subscriptions paid in advance	25 4 0	Sundry Debtors—	
		Premises Account	1,439 6 2
	799 5 7	Permanent Post-Graduate Committee	25 0 0
Accumulated Funds—			1,464 6 2
Balance at December 31, 1931	2,364 11 8	Library—	
Less Deficiency in Revenue Account for year ended December 31, 1932 ..	106 6 4	Balance at December 31, 1931	1,159 17 7
	2,258 5 4	Add Purchase and Binding of Books	30 15 11
			1,190 13 6
		Less Depreciation written off	115 19 9
			1,074 13 9
		Furniture and Office Equipment—	
		Balance at December 31, 1931	244 14 0
		Less Depreciation written off	24 9 5
			220 4 7
	£3,057 10 11		£3,057 10 11

Income and Expenditure Account for the Year ended December 31, 1932.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
To Salaries <i>et cetera</i> —												
Medical Secretariat and Staff (6)	1,535	8	0									
Financial Secretariat (1) ..	90	0	0									
Librarian (1)	163	16	0									
				1,789	4	0						
„ Rent, Offices <i>et cetera</i>	1,885	0	0									
„ Printing and Stationery	146	2	10									
„ Stamps and Telegrams	157	6	6									
„ Telephones	78	2	3									
„ Family Endowment Tax	44	2	1									
„ Interest, THE MEDICAL JOURNAL OF AUSTRALIA, No. 2 Account	19	12	2									
„ Legal Expenses	13	12	0									
„ Travelling Expenses	34	3	4									
„ Insurance	5	15	0									
„ Exchange and Bank Charges ..	8	7	11									
„ Sundries (General Meetings, Newspapers, Hire of Chairs <i>et cetera</i>)	36	6	3									
„ Federal Committee	79	18	0									
				2,513	8	4						
„ Depreciation—												
Library	115	19	9									
Office Furniture and Equipment	24	9	5									
				140	9	2						
				£4,443	1	6						
By Subscriptions, 1932	6,855	17	0									
„ Subscriptions, 1931	1,000	4	9									
„ Subscriptions, previous years ..	52	1	6									
							7,908	3	3			
Less Proportion due to British Medical Association	2,032	0	8									
THE MEDICAL JOURNAL OF AUSTRALIA	1,981	12	6									
							4,013	13	2			
							3,894	10	1			
„ Interest, Premises Account ..							72	14	4			
„ Rent, Assembly Hall							85	10	0			
„ Sales, C.F.A., <i>et cetera</i>							5	6	6			
„ Post-Graduate Fund							274	10	3			
„ Donations							4	4	0			
„ Balance—Deficiency for the year ended December 31, 1932, transferred to Accumulated Funds Account							106	6	4			
							£4,443	1	6			

We have examined the books and vouchers of the New South Wales Branch of the British Medical Association for the twelve months ended December 31, 1932, and we certify that, in our opinion, the above Balance Sheet and accompanying Income and Expenditure Account represent the true financial position of the Association at December 31, 1932, and the transactions for the year ended that date respectively as shown by the books of the Association and information supplied us.

COATES, CUNNINGHAM & COMPANY.

Chartered Accountants (Aust.)

Australasian Medical Congress (British Medical Association).

The Fourth Session of the Australasian Medical Congress will be held in Hobart in January, 1934.

British Medical Association.

It is noted with great pleasure that the Annual (1935) Meeting of the British Medical Association will be held in Melbourne in November of that year.

"The Medical Journal of Australia."

The same high scientific standard of the Journal has been maintained as in previous years, and the Directors and the Editor are to be congratulated on their work.

Congratulations.

A letter of congratulation was sent to Sir John McKelvey on the honour of knighthood conferred upon him by His Majesty the King. Congratulations were also extended to Dr. J. E. Webb and Dr. C. C. Fleck on their election to the Legislative Assembly, and to Dr. A. E. Colvin and Dr. H. R. R. Grieve on their appointment to the Legislative Council.

A. J. GIBSON,
President.

FINANCIAL STATEMENTS.

Dr. J. E. V. Barling moved that the statement of receipts and expenditure be received. The motion was seconded by Dr. A. J. Collins and carried. Dr. Barling also dealt with the balance sheet and financial statement of the premises account. Dr. Collins seconded Dr. Barling's motion that the statements be received, and the motion was carried.

ELECTION OF OFFICE-BEARERS.

Dr. A. J. Gibson announced that Dr. A. J. Collins had been elected as President-Elect for the ensuing year. He also pointed out that no election for members of Council had been necessary, since the number of nominations coincided with the required number of Councillors. He took this as a sign that the members of the Branch were satisfied with the way in which the affairs of the Branch had been conducted during the previous year. The members of Council were as follows: Dr. J. E. V. Barling, Dr. G. M. Barron, Dr. George Bell, Dr. C. B. Blackburn, Dr. A. M. Davidson, Dr. Lindsay Dey, Dr. J. A. Dick, Dr. B. T. Edye, Dr. R. V. Graham, Dr. Hugh Hunter, Dr. W. K. Inglis, Dr. C. H. E. Lawes, Dr. A. A. Palmer, Dr. W. F. Simmons, Dr. Kenneth Smith, Dr. E. H. M. Stephen, Dr. W. Vickers.

Messrs Coates, Cunningham and Company, chartered accountants, were appointed auditors for the ensuing year.

On the motion of Dr. B. T. Edye, seconded by Dr. Hugh Hunter, Dr. A. B. K. Watkins was appointed representative of the Branch in the Representative Body, 1933-1934.

On the motion of Dr. B. T. Edye, seconded by Dr. Hugh Hunter, Dr. W. H. Cook and Dr. J. H. Phipps were appointed delegates of the Branch to attend the annual meeting (1933) of the British Medical Association in Dublin.

INCOMING PRESIDENT'S ADDRESS.

Dr. A. W. Holmes & Court delivered his President's address (see page 541). A vote of thanks was passed to Dr. Holmes & Court, on the motion of Dr. A. J. Gibson, seconded by Dr. A. J. Collins.

INDUCTION OF PRESIDENT.

Dr. A. J. Gibson inducted the President for the year 1933-1934, Dr. A. W. Holmes & Court. Dr. Holmes & Court thanked the members for his election, and the meeting closed with a vote of thanks to the retiring President, Dr. A. J. Gibson, moved by Dr. A. W. Holmes & Court.

Congresses.

CONFERENCE OF THE CHINESE MEDICAL ASSOCIATION.

DR. CHARLES McLAREN has forwarded the following interesting account of the first general conference of the Chinese Medical Association.

The Australian medical profession may well be interested to learn something of a noteworthy and historic medical gathering which has just been held in China—the first meeting of the newly inaugurated Chinese Medical Association. That association was formed by the amalgamation of the two medical associations—one foreign (and largely missionary), the other Western-trained Chinese—already existent in China. Scientific medicine in China has had a history full of romance and interest. In 1569 the Jesuit medical missionaries opened a hospital; notable among their achievements was the cure of malaria with cinchona bark of the Emperor Kang Hsi. Rather more than a hundred years ago, from small beginnings and in the face of tremendous difficulties, began that later work of the Protestant medical missionaries which today has assumed such importance in the East. It is probably not generally known that the Christian idealism of the West is represented today in the East by some seven hundred hospitals and twenty medical schools dotted in strategic centres all over the Orient. The gathering just held in Shanghai was notable in many ways. In the first place it was a truly national gathering. There were gathered representatives from the far-scattered provinces of the Republic of China, as well as visitors from Manila, Korea and Britain. The chairman of the conference was Dr. W. S. New; and his distinguished office was further adorned by the graciousness and efficiency with which he carried through his onerous duties. He was ably assisted by his enthusiastic associates, the secretary, Dr. H. P. Chu, and other executive officers.

One of the things that struck me was the broadly international character of this truly national gathering. Chinese, British, American, European continental medical men and women met together in a spirit of entire understanding and helpful cooperation. I have seldom been at an international gathering where the barriers of nation and race were so completely transcended. We met each other as equals, as friends and as partners in the great work of scientific medicine and humanitarian service.

Noteworthy was the easy mastery of the English language shown by our bi-lingual Chinese colleagues. It put to shame the poor efforts with an oriental tongue of some of us who have lived long in the East. If there remained with me any traces of a "Nordic superiority complex", I hope I finally lost them at that gathering.

The high standard of the professional work and the value and quality of the scientific research being carried on in China was demonstrated by the papers submitted to the conference. Not only at the Rockefeller Hospital in Peking and at the Henry Lester Institute of Preventive Medicine in Shanghai does the spirit of research find domicile, but throughout China, in the minds of both Chinese and foreign medical men there exists a widespread and eager desire to contribute to the advance of medicine. One of the most enthusiastic discussions of the conference was that which followed an able paper on "Method of Statistical Research" by Major Edge, who has been lent for six months to the Lester Institute by the London School of Tropical Medicine.

As I joined in the meetings of the conference and met with my Chinese colleagues I could not escape the sense that there was a real renaissance movement. China is divided; China has been smitten by pestilence and flood and war, yet hope and resilience and enthusiasm for work and confidence in and for the future were characteristics that marked the attitude of those forward-looking and forward-moving Chinese medical practitioners, educators and research workers.

Yet again the high idealism that pervaded the gathering could not but impress and inspire. As Professor Gerrard,

of the Chair of Medicine in the Hong-Kong University put it, once more the medical profession was demonstrating that, transcending materialism, it was most of all concerned with the soul of things. More striking still in its naive idealism was a speech by Dr. Mary Stone (a Western name, but very much a Chinese lady), pioneer of women medical practitioners in China. I doubt whether a speech so revealing of the deeper things of the heart could be heard in a medical gathering of us more reticent Westerners. Dr. Stone's face was turned to the future, and she told us how bright the prospect seemed. To her eager mind this conference of medical men and women was foretaste of that kingdom of health of which the Hebrew prophets had spoken and which the Great Physician inaugurated—kingdom where "the child shall die one hundred years old" and sickness shall be done away.

Dr. Stone spoke a little of the humiliation that came to her as a Chinese because of the taken-for-granted specially strict quarantine precautions meted out by other countries to any ships from Chinese ports.

Dr. Stone is doyen of women medical practitioners in China. She has as colleagues a noteworthy group of younger Chinese women. It is indeed remarkable how well the foundations of women's medical education have been laid. The charm, open frankness, professional attainments and withal womanly modesty of these members of the profession augur well for the medical service being made available for the women and children of China.

Immediately following upon, and indeed part of, the general medical conference, there was held the first national Chinese conference on leprosy. Experts from China and beyond met for two days to discuss ways and means of meeting the problems of leprosy in China.

Neglect and worse have characterized the attitude to this problem in the past. I heard a gruesome story of the lepers of a community bidden by the officials of a certain district to a feast. Feast indeed there was, but it was followed by a firing squad and a common grave.

The communists also have taken cognizance of the leper menace. Their remedy was simple, and I was credibly informed that there was a place in China where it was tried. The remedy was to behead the lepers.

But a new day has dawned for these unfortunate sufferers. This first conference is but one indication of the increasing hope and purpose with which the scientific, humanitarian and religious forces are being marshalled to solve at length this, one of China's age-long sorrows.

An account of the conference would be incomplete which did not make some special mention of the wonderful hospitality of our Shanghai hosts. And the Chinese cooking! Who shall tell the wonders of that acme of the culinary art, a Chinese feast? If it was not my heart that failed me, it surely was my dietetic capacities, by the time we arrived at, say, the seventeenth course, and there were still many to run. Yes, we had real bird-nest soup. Would that such culinary good fortune might befall me again. Nor are eggs, aged as the patriarchs, a fable. I gathered that they are kept in a solution rich in calcium, which penetrates and preserves and finally produces a new material from the original constituents. I did not recognize it as egg, but it was good to eat.

Australian medical schools were well represented at the medical conference by Dr. H. Owen Chapman, of Sydney, Dr. Hackett (recent appointee for tropical diseases research to the Lester Institute), of Adelaide, and Dr. Jean Davies, of Melbourne. The writer, also from Melbourne, gathered much from and sought to give something to the conference.

Correspondence.

HYPOGLYCAEMIA.

SIR: I read the article on hypoglycaemia by Dr. Sippe and Dr. Bostock (THE MEDICAL JOURNAL OF AUSTRALIA, February 18, 1933) with great interest. I would like to congratulate the authors on the valuable paper they have compiled and the emphasis they have placed on the high

incidence of such cases. The value of such a simple and efficient therapeutic measure as increased carbohydrate and decreased fat consumption in such cases has not apparently received the recognition it deserves.

Glucose tolerance tests are not necessary. The busy practitioner need only prescribe the diet and if hypoglycaemia is the cause of the symptoms, improvement will follow in a few days.

The writers stated that in their experience the percentage of cases of migraine associated with hypoglycaemia is not great. I have been interested in this question for four or five years and my experience does not coincide with this statement. I have come to the conclusion that every case of migraine in which there is no obvious cause for the symptoms is worth a trial with the increased carbohydrate-decreased fat diet. I have been surprised by the number of "cures", and I use the word advisedly, brought about by this procedure. Many patients who have decided to remain in possession of their septic foci, in spite of advice to the contrary, are numbered among the "cures", as far as the migrainous symptoms are concerned.

The following cases will serve as illustrations:

1. Medical practitioner, aged thirty-five, frequent attacks of migraine, accompanied by vomiting and causing incapacity for from twelve to twenty-four hours. Treatment: two or three lumps of loaf sugar three times a day after food. Cured. When, owing to failure to carry out the routine, an attack occurred, it was frequently aborted by taking one to one and a half ounces of sugar in water or weak tea.

2. Workman, aged forty, lost one-third total working time on account of migraine over a period of seven years. Treatment with sugar commenced two years ago. A few days only lost since.

I am able to report one cure of typical bronchial asthma as a result of increased carbohydrate-decreased fat diet. This case was mentioned in a paper on "Cyclic Vomiting" published in THE MEDICAL JOURNAL OF AUSTRALIA of October 18, 1930. He is still under observation and never suffers from asthma, according to the statements of his parents, unless the exhibition of sugar ceases, and always develops asthma under those circumstances. The child, at the commencement of treatment four years ago, was thin, easily fatigued, and unhealthy looking. Removal of infected tonsils and a large pad of adenoid tissue failed to improve his asthma. He has had no other treatment but the diet mentioned.

Hypoglycaemia, or at any rate the clinical manifestations of hypoglycaemia, as the authors point out, is more frequently met with in children than in adults, and the results of treatment are gratifyingly efficient. It is difficult at times to overcome the old wife's traditional belief that sugar is bad for children.

The authors state, and it seems to be one of those statements that appear in all discussions on this subject, that hypoglycaemic children stand infections badly. I doubt the truth of this statement. Infection at the onset, by rapidly using up the glycogen stored in the liver, causes the state known as acetonæmia. An attack of cyclic vomiting frequently ushers in measles, or scarlet fever in a hypoglycaemic child, and the statement is made that the child stands infections badly. If the medical attendant recognizes the smell of acetone in the breath and gives sugar by mouth, or *per rectum* if the vomiting be severe, the symptoms due to the incomplete combustion of fat, in the absence of liver glycogen, soon subside, and the patient stands the infection as well as any other child. If the hypoglycaemia is recognized and treated with increased carbohydrates and decreased fats in the diet as a routine, prior to the onset of the infection, my experience has been that no difference can be detected between the defence of the hypoglycaemic child and his mate, whose sugar tolerance curve is regarded as normal.

The question of cyclic vomiting and appendicitis in childhood is a very interesting one, and one also full of pitfalls for the unwary. Marfan, in his excellent monogram, "*Les Vomissements Périodiques avec Acétonémie*", states that many attacks of cyclic vomiting are accompanied by pain and tenderness in the iliac fossæ, and stresses the seriousness of unnecessary surgical intervention. It is rare to find cyclic vomiting included in the

list of differential diagnoses of acute appendicitis in childhood. The authors of the paper state "that it is a serious thing to remove the appendix in a child suffering from cyclic vomiting, besides being of no value". This is true, provided the observer is certain that the appendix is not inflamed. An attack of appendicitis in hypoglycemic children is frequently ushered in with an attack of cyclic vomiting, as is the case with the onset of one of exanthemata. It is also a very serious thing to let an inflamed appendix proceed to abscess formation and rupture in a child with cyclic vomiting. The differential diagnosis is not easy. The writer was twice called upon to face this problem within six weeks. Both appendices were found to be inflamed. One contained fluid pus. The acetonaemia was mild in one case and severe in the other. The latter was treated with glucose solution *per rectum* with very satisfactory results.

In the writer's opinion increased carbohydrate should be given as a routine to all persons prior to anaesthesia. This procedure may not prevent the immediate after-vomiting, but it certainly does prevent the excessive vomiting with acetonaemia, to which all hypoglycemics are predisposed and on which fact they are usually silent till after the anaesthetic has been administered.

I have read numerous text books in which "increased carbohydrate intake" prior to anaesthesia is recommended, but have never seen a definite dosage set forth. The following dosage has been found to give good results: six lumps of loaf sugar in six ounces of water, to be taken three times a day on the day prior to operation and once early on the morning of operation.

Yours, etc.,

IDRIS MORGAN, M.B., Ch.M.

Newcastle,
New South Wales,
April 11, 1933.

CANCER OF THE BREAST.

SIR: In his instructive paper, "The Present Position of Deep X Ray Therapy", read before the Fourth Australian Cancer Conference, Dr. A. T. Nisbet makes the statement:

I am sorry to labour this point, but in my opinion surgery of cancer of the breast has failed, and failed very badly, and I do think it time that we here . . . should attempt some other form of treatment.

The large and apparently increasing number of early recurrences that are being met with after the so-called "radical operation" for *carcinoma mammae* in Sydney calls for the closest investigation. These results are at distinct variance to those being obtained in other countries.

In my recent paper on "Plumbing", published in THE MEDICAL JOURNAL OF AUSTRALIA of March 18, 1933, a medical superintendent has outlined the treatment meted out to a case of cancer of the breast in a metropolitan and teaching hospital located in Sydney:

A large soft mass was palpable in the left breast, the mass was attached to the skin and freely movable, skin had the appearance of *peau d'orange*. The umbilical fistula was injected with bismuth paste and a catheter introduced. By X ray examination the catheter was shown to pass downwards and backwards to the level of the symphysis, it was then curved on itself to the right, and above this. On March 25, 1931, a local amputation of the left breast was performed. The pathological report on microscopic examination was scirrhous carcinoma. On April 28, 1931, radical removal of the left breast was performed, together with removal of glands of the axilla. On March 25, 1931, the umbilical fistula was explored and the track of the sinus opened up. The patient was discharged on June 11, 1931, with the wound healed.

Such unorthodox and obsolete methods—and the above case is by no means an isolated instance—demand severe censure.

In THE MEDICAL JOURNAL OF AUSTRALIA of September 21, 1918, in discussing this malady, I wrote:

In planning the technique of this operation one must consider the different elements which have become recognized as essential to permanent success: (i) Sufficient tissue must be removed immediately about the malignant growth, and this must include every particle of breast tissue. (ii) All lymphatics and lymphatic glands must be removed without section in one mass. (iii) A suitable plastic procedure should be performed, so as to secure union by first intention.

There is no question of the truth of the dictum of Watson Cheyne: "The patient's chance is in the first operation and, therefore, the earlier and more radical the removal of the cancerous breast the less the probability of recurrence." In other words, an incomplete operation for cancer of the breast offers the patient little more probability of cure than if there had been no operation at all.

To condemn orthodox surgery because of the unforgettable failures of unorthodox methods is unjustifiable.

Yours, etc.,

H. RUTHERFORD DARLING.

229, Macquarie Street,
Sydney.

April 11, 1933.

MINERS' NYSTAGMUS.

SIR: The fact that this subject has come under review in the correspondence column encourages me to disclose my views on the subject, despite their heterodoxy. A large body of expert research has reiterated the conclusion "that this disability is due to the strain on the eyes caused by poor illumination". I am of opinion that this conclusion is wrong; that the condition is not caused by poor illumination, but that it is caused by gas poisoning (quite possibly chronic carbon monoxide poisoning, but in any case, by the action of small quantities of poisonous gases).

Miners' nystagmus is an illness of somewhat dramatic character and intrigues the interest of every practitioner who has to deal with it; and it happened that I was engaged in practice in the coal mining districts of south Gippsland, where I had the opportunity of examining all the coal miners of the Outtrim and Jumbunna pits and a lesser number of those engaged in the Koorumburra and Wonthaggi pits during a period of ten years. Of the one thousand or more coal miners whom I examined with special reference as to whether they exhibited symptoms of nystagmus, only two showed slight signs of nystagmus, and these two declared that they had contracted it in the coal mines of New South Wales before coming to work in the coal mines of Gippsland.

These facts set me considering what was it that caused a greater incidence of nystagmus in the coal miners of New South Wales than in those of Gippsland. Was it better lighting in the coal mines of Gippsland? Obviously that was absurd; for worse lighting than that provided in the coal mines of Gippsland was impossible to imagine. Each miner had attached to his cap a small tin can with a wick thrust into the spout of it; these cans were filled with a vegetable oil, were called "pit lamps", and burned with a small smoky flame. Since the Gippsland miners were at the least as inadequately provided with light as were the New South Wales miners, was there any circumstance in which the two classes differed and which might account for the different incidence of nystagmus? There was such a circumstance. If the pit lamps that are used in Gippsland were to be used in New South Wales, there would be violent explosions and loss of life, for "the mines are gassy". The geological formation is different in the two districts; that of Gippsland is very porous and very faulty, and noxious gases, particularly carbon monoxide, are dispersed almost as fast as formed; "the mines are not gassy".

All this is not merely of academic interest; it has a practical bearing. If nystagmus is not caused by inadequate lighting, better illumination will not relieve it

(though I am far from advocating any relaxation of legal requirements for proper illumination). What will help is more and better ventilation.

Yours, etc.,

153, Foster Street,
Dandenong,
Victoria.
Undated.

A. E. TAYLOR.

Obituary.

ROBERT HAMILTON RUSSELL.

We regret to announce the death of Dr. Robert Hamilton Russell, which occurred on April 30, 1933, at Melbourne, Victoria.

Diary for the Month.

- MAY 9.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 12.—Queensland Branch, B.M.A.: Council.
MAY 16.—New South Wales Branch, B.M.A.: Ethics Committee.
MAY 17.—Western Australian Branch, B.M.A.: Branch.
MAY 17.—Victorian Branch, B.M.A.: Clinical Meeting.
MAY 18.—New South Wales Branch, B.M.A.: Clinical Meeting.
MAY 23.—New South Wales Branch, B.M.A.: Medical Politics Committee.
MAY 24.—Victorian Branch, B.M.A.: Council.
MAY 25.—South Australian Branch, B.M.A.: Branch.
MAY 25.—New South Wales Branch, B.M.A.: Branch.
MAY 26.—Queensland Branch, B.M.A.: Council.
JUNE 1.—South Australian Branch, B.M.A.: Council.
JUNE 2.—Queensland Branch, B.M.A.: Bancroft Memorial Lecture.

Medical Appointments.

Dr. H. H. E. Russell (B.M.A.) has been appointed a Member of the Nurses' Board, under the provisions of the Nurses' Registration Act, 1920, South Australia.

The undermentioned have been appointed members of the Advisory Committee for the purposes of the *Pure Food Act*, 1908, New South Wales, as from February 3, 1933, in accordance with the terms of Section 6 (2) of the said Act: Dr. R. Dick (B.M.A.), Dr. E. L. Morgan (B.M.A.), Dr. E. S. Morris (B.M.A.), Dr. J. S. Purdy (B.M.A.).

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought etc., see "Advertiser", pages xvi, xvii and xix.

- BUNDABERG GENERAL HOSPITAL, BUNDABERG, QUEENSLAND: Resident Medical Officer.
CHILDREN'S HOSPITAL (INCORPORATED), PERTH, WESTERN AUSTRALIA: Junior Resident Medical Officers (male).
DEVON PUBLIC HOSPITAL, LATROBE, TASMANIA: House Surgeon.
HOBART PUBLIC HOSPITAL, HOBART, TASMANIA: Junior Resident Medical Officer.
LAUNCESTON PUBLIC HOSPITAL, LAUNCESTON, TASMANIA: Resident Medical Officer (male).
MATER MISERICORDIE CHILDREN'S HOSPITAL, BRISBANE, QUEENSLAND: Resident Medical Officer.
PERTH HOSPITAL, PERTH, WESTERN AUSTRALIA: Resident Medical Officers (3).
ROYAL AUSTRALIAN NAVY: Medical Officer.
ROYAL HOSPITAL FOR WOMEN, SYDNEY, NEW SOUTH WALES: Resident Medical Officer, Junior Resident Medical Officer.
THE UNIVERSITY OF MELBOURNE, VICTORIA: Demonstrator in Clinical Physiology.
THE WOMEN'S HOSPITAL, CROWN STREET, SYDNEY, NEW SOUTH WALES: Junior Resident Medical Officer.

Medical Appointments: Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH	APPOINTMENTS.
	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmalm United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phoenix Mutual Provident Society.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	Brisbane Associated Friendly Societies' Medical Institute. Chillagoe Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL are advised, in their own interests, to submit a copy of their agreement to the Council before signing. Lower Burdekin District Hospital, Ayr.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Combined Friendly Societies, Clarendon and Kangarilla districts. All Lodge Appointments in South Australia. All Contract Practice Appointments in South Australia.
SOUTH AUSTRALIAN: Secretary, 107, North Terrace, Adelaide.	WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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